NILU: OR 26/2007
REFERENCE: O-8208
DATE: JUNE 2007
ISBN: 978-82-425-1880-4 (trykt)
978-82-425-1881-1 (elektronisk)

International Co-operative Programme on Materials, including Historic and Cultural Monuments.

Trend exposure programme 2005 – 2006.

Environmental data report October 2005 to December 2006

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Summary

The UN/ECE international co-operative programme of effects on materials is an international project that has been running for eight years at 39 test sites in 14 countries from 1987 to 1995. A second phase of the project started in 1997 with an adjusted number of test sites and countries participating. In the second phase 30 test sites and 19 countries have participated. During the interim period 1995 to 1997 trend analysis for metal corrosion and exposure of the two materials glass and polymer continued. For the year 2002-2003 the ICP materials programme was combined with the EU project MULTI-ASSESS that used the same field test sites. For the year 2005-2006 trend exposures with analysis of corrosion for the materials carbon steel, zinc and Portland limestone, and of soiling for glass samples, were performed together with environmental parameter measurements and reporting.

The Norwegian Institute for Air Research has been a sub-centre and responsible for the environmental data storing, reporting and evaluation during the whole programme. This report includes the environmental data reported from the 2005-2006 trend exposures.

This report presents the environmental measurements for the ECE-ICP materials trend exposure programme, 2005 - 2006. All data from the participating test sites are reported here. The exposure in most countries started in October or November in 2005. The yearly average values have been calculated according to the month where the exposure has started. The monthly and yearly values for the period are reported in four Appendixes A, B, C and D. Appendixes A and B give the monthly data reported directly from the ICP materials test sites. Appendixes C and D report two month's data for HNO_3 and particle deposition measured with IVL passive samplers and analysed at IVL Gothenburg, Sweden.

To obtain a good database for dose-response evaluation, it is important to have a wide range in the data for the most important parameters. The data obtained show that we have a good spread in the data for all important gases as well as for the most important meteorological parameters.

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1 Introduction

Airborne acidifying pollutants are known to be one major cause of corrosion of different materials including the extensive damage that has been observed on historic and cultural monuments. In order to fill some important gaps of knowledge in this field the Executive Body for the Convention on Long-range Transboundary Air Pollution decided to launch an international co-operative programme ECE/ICP materials. The programme has been running since September 1987 and has involved exposure of materials at more than 30 test sites in Europe.

The aim of the programme has changed focus during the time past. In 1987 the focus was on the impact of SO_2 and climate. Later the programme was enlarged to perform a quantitative evaluation of the effect of NO_x and other pollutants like ozone and sulphur pollutants in combination with climatic parameters on the atmospheric corrosion of important materials. In 2002 an EU-project MULTI-ASSESS EVK4-CT-2001-00044 was founded to extend the ECE/UN study. New parameters like HNO_3 and particulate were introduced and the study was expanded from corrosion to corrosion ad soiling. In 2005 a new trend exposure programme was started, and exposures of main indicator materials were planned to take place every third year together with collection of environmental parameters. The aim of the trend exposures is to follow the development of corrosion trends with time in Europe in the present quickly changing pollutant and climate situation.

The whole programme has been and is organised with Sweden as lead country and the Swedish Corrosion Institute (SCI), now the Corrosion and Metals Research Institute (KIMAB), serving as the Main Research Centre. Sub-centres in different countries have been appointed, each responsible for their own materials group. The materials groups are:

Structural metals:

- Steel and zinc for trend analyses (Sub-centre responsible for evaluation: SVUOM Praha a.s., Prague, Czech Republic),
- Zinc for 4 years of exposure (EMPA Corrosion/Surface Protection, Dübendorf, Switzerland)
- Copper and cast bronze (Bayerisches Landesamt für Denkmalpflege, Munich, Germany).

Stone materials, Portland limestone (Building Research Establishment Ltd., Department of Environment, Waterford, United Kingdom).

Paint coatings, steel with silicon alkyd paint (Norwegian Institute for Air Research, Kjeller, Norway).

Glass materials, Two types of glass M1 and M3 (Institute of Chemistry, Academy of Fine Arts, Vienna, Austria)

Norwegian Institute for Air Research has been the sub-centre for the environmental database through the whole programme.

With the introduction of the MULTI-ASSESS project the number of partners were increased. Later in 2002 another extension to the project was made through the MULTI-ASSESS-NAS where also a sub- centre for concrete and more stone materials was established.

Stone and concrete materials:

- Standard Portland concrete, Latvian limestone (Riga Technical University, Riga, Latvia).
- Portland limestone, Carrara marble, Calcareous Baumberger sandstone (Building Research Establishment Ltd., Department of Environment, Waterford, United Kingdom).
- Gotland sandstone (Swedish Corrosion Institute, Stockholm, Sweden).

Soiling materials:

- Synthetic polymeric materials (Middelsex University, GB)
- Modern Glass (LISA – Universite Paris XII, Paris, France)

Extended environmental analyses, HNO_3 and passive particle deposition measurement was introduced in the MULTI-ASSESS project (IVL Swedish Environmental Research, Gothenburg, Sweden),

For the **trend exposure programme** starting in 2005 a selection of materials and exposure sites was made. Carbon steal, zinc and Portland limestone samples for corrosion and modern glass samples for soiling, were exposed. Simultaneously a range of environmental parameters were measured (Table 1 and Appendix A – D) including HNO_3 gas and particle deposition.

A complete list of participants and national contact centres is given in Appendix E.

2 The measuring programme

The measuring programme for the trend exposures is given in Table 1

Table 1: The measuring programme in ECE/ICP-materials trend exposures 2005 - 2006.

Components to be measured		
Mandatory	Gas Precipitation Particulates Climate	SO_2, O_3, NO_2, HNO_3(IVL) mm, pH, SO_4-S, NO_3-N, Cl^- particle deposition (IVL) Temperature, relative humidity
Optional	Precipitation Particulates	Conductivity, NH_4-N, Na^+, Ca^{2+}, Mg^{2+}, K^+, PM10

The data are reported to the environmental sub-centre as monthly mean values, except for mm precipitation, which is reported as the monthly sum. Two monthly mean values are reported for HNO_3 and two monthly sums for the particle deposition data collected on IVL passive samplers for all sites.

The data are presented as monthly and yearly values for the project period. In this report the mean and total amount values for the different exposure periods are reported.

The quality control of the reported data is the responsibility of the countries and partners that report the data. The environmental sub-centre will control the data reported for outliers and create the joint database. It will perform an evaluation of the data files and look for trends in the data set.

3 Data from the monitoring test sites

The data are sent to the environmental sub-centre as Excel data files on e-mail.

All data presented by the environmental sub-centre are given with the same accuracy as in the reporting forms agreed upon. For data series which include values "below the detection limit", these are, by convention, replaced with one half of the reported detection limits when calculating the mean values.

4 Monthly mean concentrations

The average monthly data reported for the trend exposure in the period October 2005 to December 2006 for the test sites are given in Appendix A. The calculated average yearly data are given in Appendix B. The two monthly values for particles and HNO_3 are given in Appendix C. The calculated average yearly data for particles and HNO_3 are given in Appendix D. The participating countries are reporting data on a monthly basis and are responsible for the quality control of their own data. The particle deposition and HNO_3 are analysed and reported from IVL, Sweden.

5 Calculation of monthly values

For their own test sites the participants shall calculate the mean values in accordance with the following equations.

- Mean temperature (T_M)

$$T_M = \frac{\sum_1^i T_i}{i} \qquad (1)$$

T_i = measured values

i = number of records

- Mean relative humidity (RH_M)

$$RH_M = \frac{\sum_1^i RH_i}{i} \qquad (2)$$

- Mean gas concentrations G_M

$$G_M = \frac{\sum_1^i G_i}{i} \qquad (3)$$

For some sites where complete information of the sampling period exists, another equation is used

$$G_M = \sum_1^i \frac{(n_i \cdot G_i)}{\sum_1^i n_i} \qquad (4)$$

n_i = sampling period

- Precipitation

$$mm = \sum_1^i mm_i \qquad (5)$$

- Weighted mean pH (pH_M)

$$pH_M = \div \log \frac{\sum_1^i \left[mm_i \cdot \left(10^{-pH_i} \right) \right]}{\sum_1^i mm_i} \qquad (6)$$

- Weighted mean values for cations, anions and conductivity (C_M)

$$C_M = \frac{\sum_1^i \left(mm_i \cdot C_i \right)}{\sum_1^i mm_i} \qquad (7)$$

6 Results

Environmental data for the ECE-ICP on materials programme has been collected since August 1987. For the first phase 1987 to 1995, data from 39 sites were collected and reported (Henriksen et al., 1997). For second exposure phase, the period 1995 to 2001, the programme was redefined and the number of sites with

reporting data was 31 (Henriksen and Arnesen, 2003, Henriksen and Arnesen, 2000). Exposures continued on these sites in the Multi Assess project until 2003 (Henriksen et al. 2005). For the trend exposures taking place from 2005 a selection of exposures sites was made. The list of test sites for the different parts of the ECE-ICP project is given in Table 2 (SCI, 2005). The sites with a not yet finalised measuring period onwards from 1987 (no end year) were participating in the 2005 / 06 trend exposures.

Table 2: List of test sites of ECE/ICP exposure programme.

Test site no.	Test site name	Country	Location	Measuring period
1	Prague-Letnany	The Czech Republic	Urban	1987→
3	Kopisty	"	Industry	1987→
5	Ähtäri	"	Rural	1987→ 2003
7	Waldhof-Langenbrügge	Federal Republic of Germany	Rural	1987→ 2003
9	Langenfeld-Reusrath	"	Rural	1987→ 2003
10	Bottrop	"	Industry	1987→
13	Rome	Italy	Urban	1987→
14	Casaccia	"	Rural	1987→
15	Milan	"	Urban	1987→
16	Venice	"	Urban	1987→
21	Oslo	Norway	Urban	1987→
23	Birkenes	"	Rural	1987→
24	Stockholm South	Sweden	Urban	1987→
26	Aspvreten	"	Rural	1987→
27	Lincoln Cathedral	United Kingdom	Urban	1987→ 2003
31	Madrid	Spain	Urban	1987→
33	Toledo	"	Rural	1987→
34	Moscow	Russia	Urban	1987→ 2003
35	Lahemaa	Estonia	Rural	1987→
36	Lisbon-Jeronimo Monastery	Portugal	Urban	1987→ 2003
37	Dorset	Canada	Rural	1987→
40	Paris	France	Urban	1997→
41	Berlin	Germany	Urban	1997→
43	Tel Aviv	Israel	Urban	1997→
44	Svanvik	Norway	Rural, industry	1997→
45	Chaumont	Switzerland	Rural	1997→
46	London	United Kingdom	Urban	1997→ 2003
47	Los Angeles	USA (CA)	Urban	1997→ 2003
49	Antwerp	Belgium	Urban	1997→ 2003
50	Katowice	Poland	Urban, industry	1999→
51	Athens	Greece	Urban,	2005→
52	Riga	Latvia	Urban,	2005→

The data reported is split into one monthly data tables in Appendixes A, one two monthly table in Appendix C, and two yearly average data tables in Appendix B and D.

7 Regularity and quality of the reported data

The test sites represent areas from background level of pollutants to urban and industry levels. The background sites have had the best regularity for the data

reported. Many of these sites belong to the EMEP monitoring programme and have long and good data records.

In urban and industrial areas it is generally more difficult to maintain sites. In programmes like ECE/ICP materials with long exposure periods, it is sometime necessary to move a test site due to local problems like new use of the property. In some countries the funding of the environmental measurements was limited in periods. This is reflected in the selection of measurement stations for the trend exposures.

A brief review of the quality of the reported data for the different test sites are given in the following pages.

7.1 Review of reported data in the trend exposure programme, 2005 – 2006.

The reporting of data for anion in precipitation and for particle concentration, PM10, were optional in the programme. Full sets of monthly data for anions in precipitation (except a single monthly value for site 52) are reported for sites 10, 23, 31, 33, 35, 45 and 52. Full sets of monthly PM10 data are reported for sites 1, 3, 10, 40, 50, 51 and 52. Station 23 reports five months of PM10 data. The full set of non-optional IVL data are reported from all sites (yearly averages, Appendix D, based on bi-monthly or monthly values, Appendix C) except from the Italian sites that do not report IVL data. The IVL monthly and yearly data are reported separately in Appendix C and D. In addition the yearly averages for IVL data for SO_2, NO_2, O_3, HNO_3 and particle mass deposition are reported together with the local data in Appendix B. For the "ordinary", non-optional local climate and gas data and IVL gas data a review of the reporting from the single countries and stations is given below.

Site 1 and 3 Czech Republic

Sites 1 and 3 have almost complete sets of data. However O_3 data are missing (except for two months) for both stations. SO_2 is missing for one month and the precipitation data for the last month for site 3.

Site 10 and 41 Germany

Site 10 Bottrop has almost a complete data set for the period. Only one month for SO_2 and NO_2 are missing. Site 41, Berlin, only report IVL data for particle deposition and HNO_3.

Site 13, 14, 15 and 16 Italy

The data reported from the Italian stations is relatively sparse. Site 15, Milan, reports a full set of monthly data for gases and climate (only amount, mm, for precipitation). Site 16, Venice has the similar coverage for the climate parameters and for SO_2, but lacks data for NO_2 and O_3. Site 14, Casaccia, lacks the two first months for T and RH and only reports the three last months for precipitation (mm). Site 14 reports all the gas data. Site 13, Rome, report no climate data and incomplete data for the gases. Site 13 lacks SO_2 data and four months for O_3.

Site 21, 23 and 44 Norway

Among the Norwegian sites, site 23, Birkenes report all data. Birkenes is the only station that report local monthly HNO_3 data. Sites 21, Oslo and 44, Svanvik report all the climate data, but only amount, mm, for precipitation. Site 44 reports all the gas data except two months for NO_2. Site 44 also reports a full set of O_3 data from IVL. Station 21 reports all NO_2 and O_3 (IVL) data but misses two months for SO_2.

Site 24 and 26 Sweden

The Swedish sites report temperature, T, and humidity, RH, with only one month missing for station 24, Stockholm. The Swedish sites report a full set of gas data from IVL. Station 26, Aspvreten, also reports a full set of local O_3 data.

Site 31 and 33 Spain

Site 31 Madrid and Site 33 Toledo report all the data except the two last months of gas data, SO_2, NO_2 and O_3, for site 33.

Site 35 Estonia

Site 35 Lahemaa reports all data except temperature, T, and humidity, RH. Of the climate data only temperature for the two first months is reported.

Site 37 Canada

Site 37 Dorset do not report any local data due to lack of funding for the local measurements. Dorset reports a full set of IVL data for all three gases.

Site 40 France

Site 40 Paris report a full set of data for all parameters except the precipitation (pH, SO4-S, NO3-N and Cl-) for the four first months.

Site 45 Switzerland

Site 45 Chaumont reports full sets of all data.

Site 50 Poland

Site 50 Katowice reports full sets of all climate (only amount, mm, for precipitation) and gas data.

Site 51 Greece

Site 51 Athens reports a full sets of data, missing one month, September, for all the parameters, but only amount, mm, for precipitation. For particle concentration, PM10 the September value is included.

Site 52 Latvia

Site 52 Riga reports a full set of all data, including IVL data for all the three gases SO_2, NO_2 and O_3. The local gas data for SO_2 and NO_2 are given as deposition of $SO4^{2-}$ (mg S/m^2) and NO^{3-} (mg N/m^2). The monthly values for these parameters are reported in Appendix A. In the table for the yearly values (Appendix B) only concentration values with unit µg m^{-3} are reported.

8 Data for regression analyses

8.1 The data base

For regression analyses the database for material damage for one year has to be correlated with the environmental database for the same period. In Appendix B and D the yearly average values for all the environmental parameters for all sites are given.

8.2 The data distribution

It is important for the evaluation of the dose-response correlation for materials with the environmental impact that we have as large spread as possible in the concentrations of the most important pollution parameters. In the following figures the yearly mean values for the exposure year 2005-2006 for the reported pollution and climate parameters are given.

In Figure 1 the spread in the SO_2 concentrations for the exposure year is shown. The numbering is in accordance with the numbers in Table 2. The values go from 36.1 Katowice µg/m^3 for down to 0.1 µg/m^3 for Casaccia. The distribution is fairly good. Low values are dominating, as expected, since the total amount of sulphur emission in Europe has been reduced during the years.

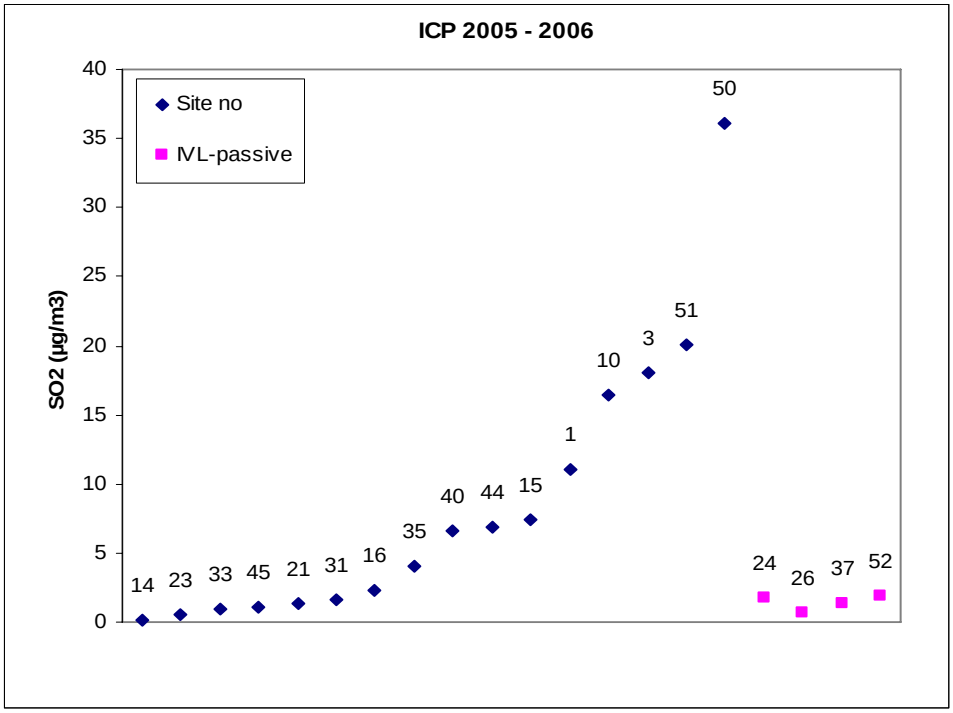

Figure 1: The spread in the yearly mean SO_2 concentrations at the test sites for the test period in ICP Materials.

In Figure 2 the spread in the NO_2 concentrations for the test period year is shown. The values go from 69.9 µg/m^3 for Athens down to 1.6 µg/m^3 at Birkenes. The distribution is fairly good. Low values are dominating in the base because of the number of EMEP sites in the programme.

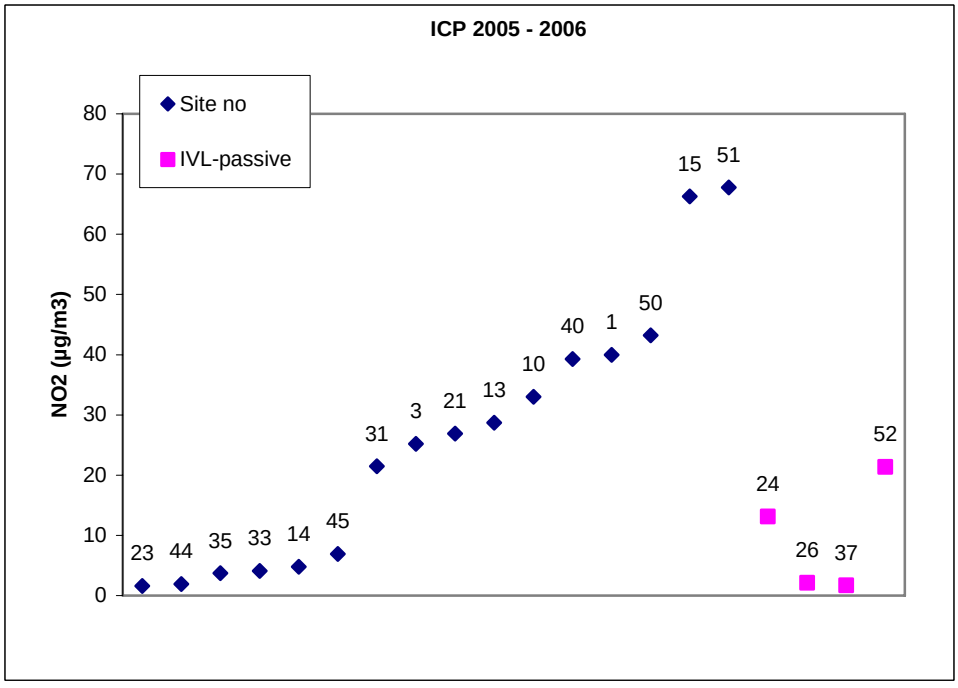

Figure 2: The spread in the yearly mean NO_2 concentrations at the test sites for the test period in ICP Materials.

In Figure 3 the spread in the O_3 concentrations for the test period is shown. The values go from 88 µg/m^3 for the EMEP station outside Toledo down to 12 µg/m^3 for Prague-Ltnany. The distribution is as expected. It is a clustering of values around 50 µg/m^3. The low values are observed in the big cities and high values in rural areas in the south and up in the alpine area.

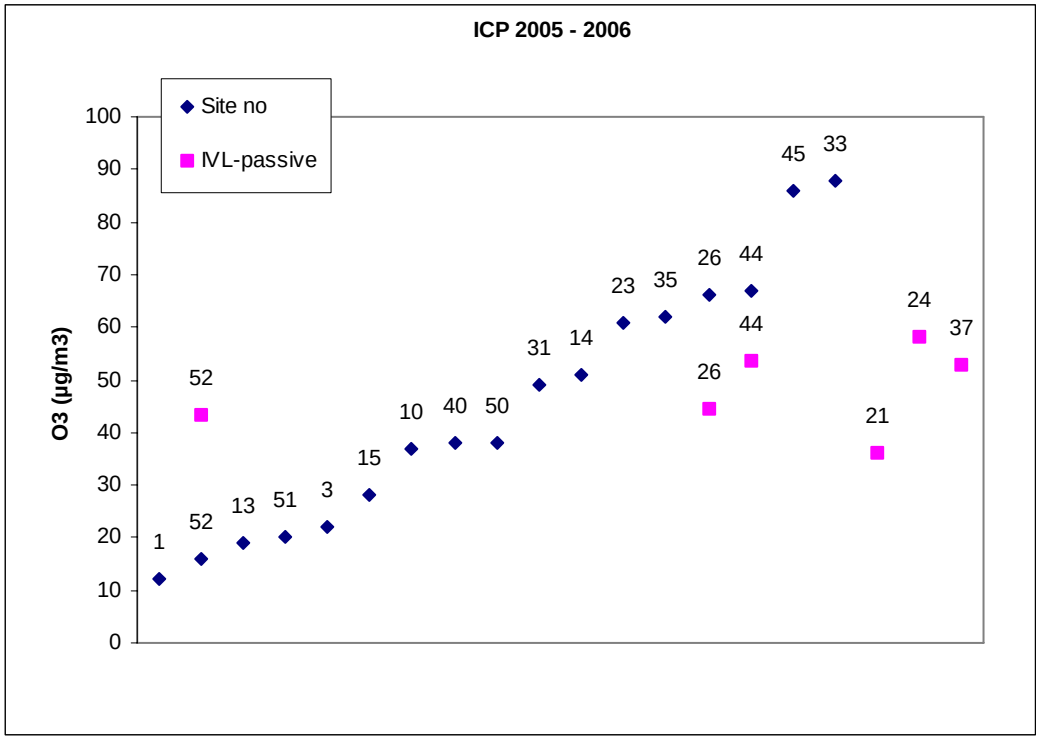

Figure 3: The spread in the yearly means O_3 concentrations at the test sites for the test period in ICP Materials.

In Figure 4 the spread for pH in the test period is shown. The pH values go from 6.42 for the Riga stations down to 4.16 in Lahemaa. The high values are observed in areas with alkaline dust.

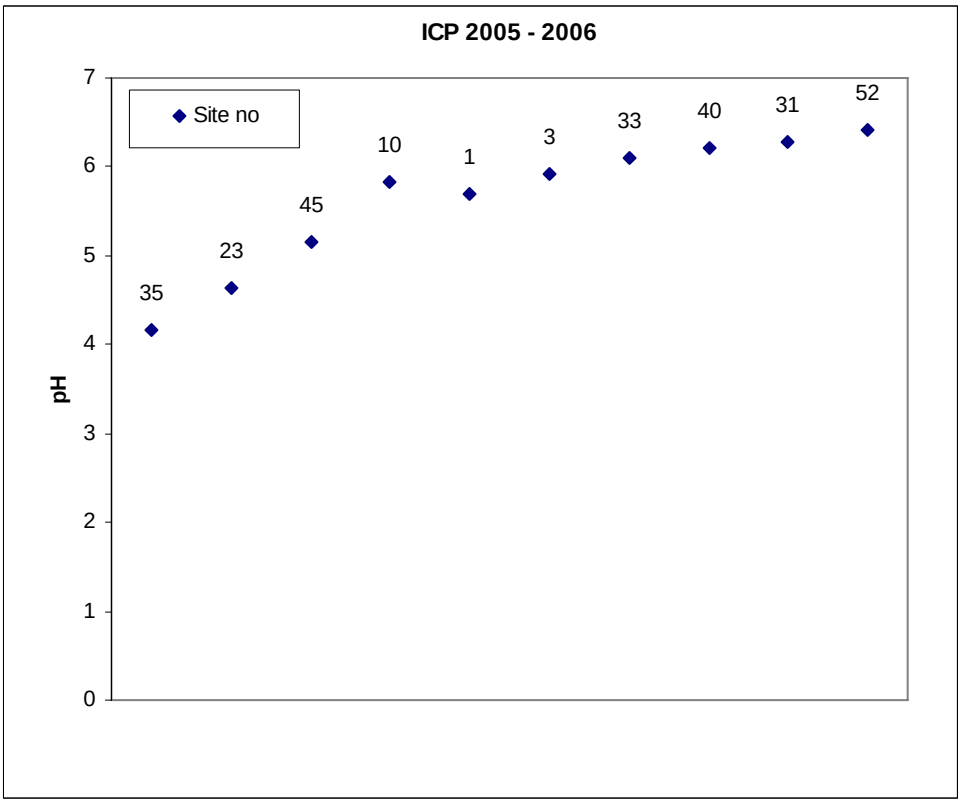

Figure 4: The spread in the yearly means pH values at the test sites for the test period in ICP Materials.

In Figure 5 the spread for temperature in the test period is shown. The yearly temperature goes from 0.3˚C for the Svanvik station up to 15.3˚C in Madrid. For the months of October to December that were reported from Athens the mean temperature was 16.3˚C. Site 35 Lahemaa only reported temperature values for November and December. The temperature database should cover the spread expected to find through out most of Europe.

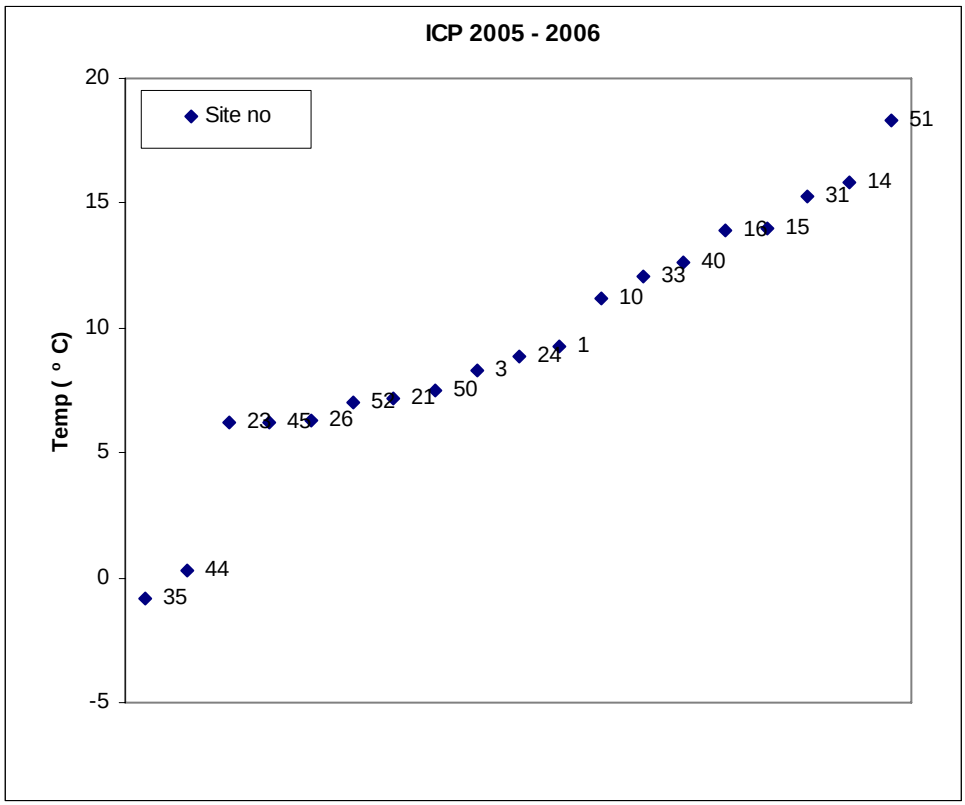

Figure 5: The spread in the yearly mean temperature at the test sites for the test period for ICP Materials.

In Figure 6 the spread for Relative humidity in the test period is shown. The yearly average RH go from 56 for the Madrid station in Spain up to 86 in Aspvreten in Sweden. The RH database should cover the spread expected to find through out Europe, but the variation for the main range of stations may be small for statistical treatment.

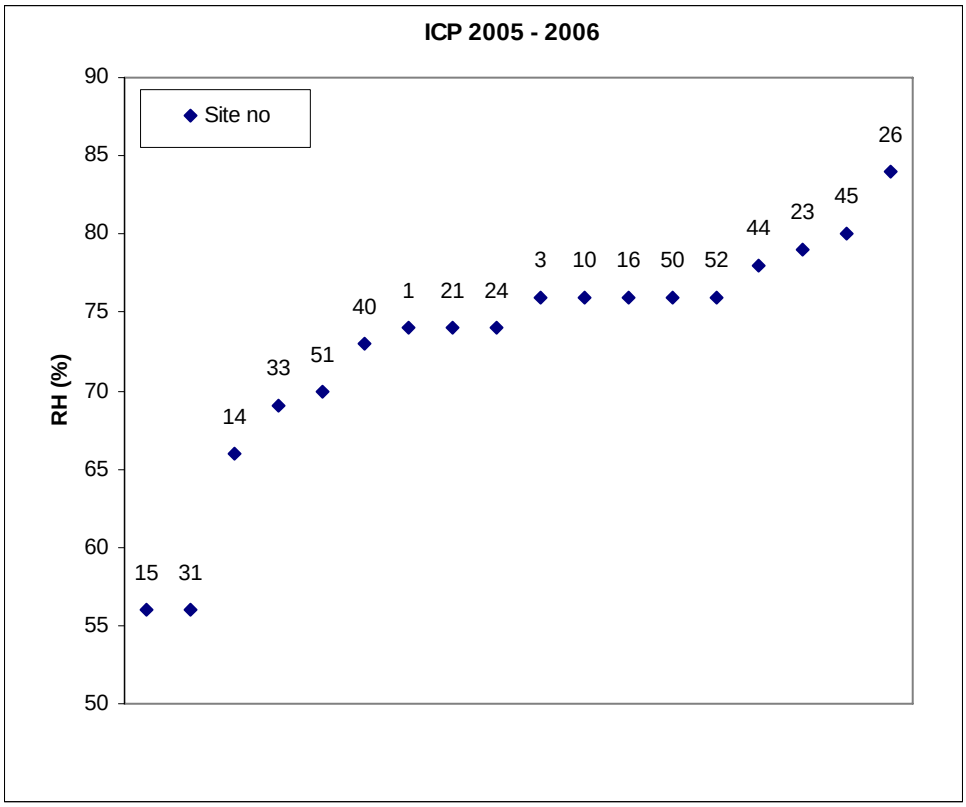

Figure 6: The spread in the yearly mean relative humidity at the test sites for the test period for ICP Materials.

In **Error! Reference source not found.** 7 the spread for mm precipitation in the test period is shown. The spread is from 374.2 mm in Athens (lacking one usually dry month, September) to 1623.1 mm at Birkenes.

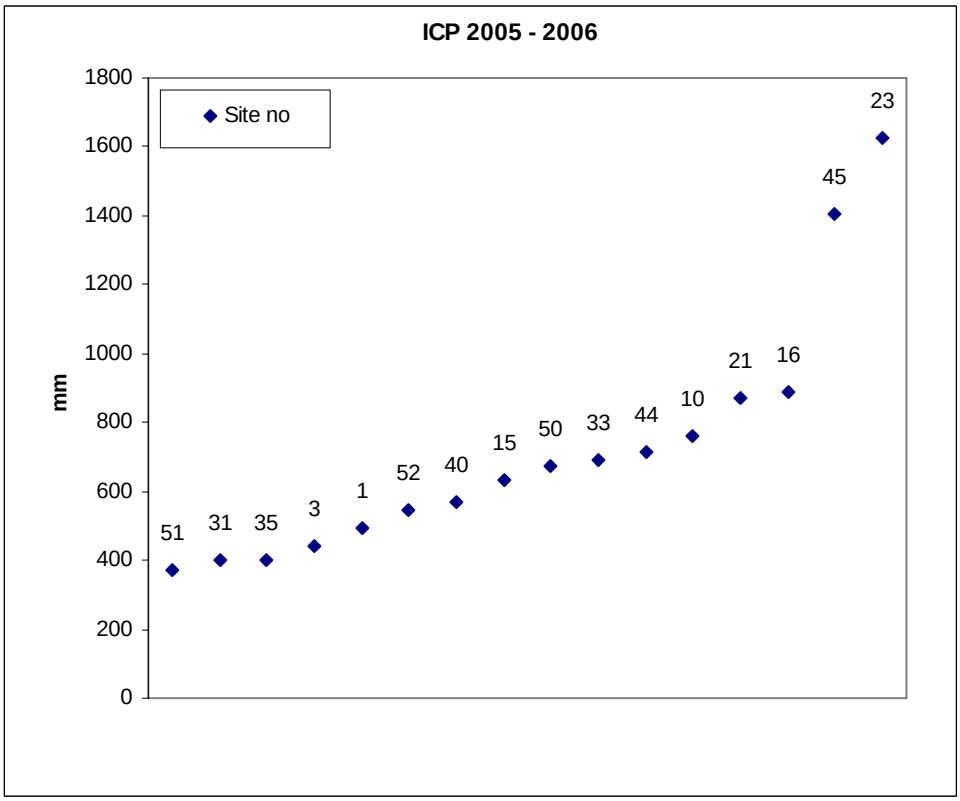

Figure 7: The spread in the yearly sum of precipitation at the test sites for the test period for ICP Materials.

Figure 8 to Figure 10 give the results from the measurements using the IVL passive samplers f or HNO_3 and particle deposition.

In Figure 8 the spread for particle deposition in the test period is shown. The figure show yearly average values from bi-monthly sampling in a position sheltered from rain and from yearly sampling in a position sheltered from both rain and wind. The rain sheltered particle deposition values go from 4.06 µg cm^{-2} month at the EMEP site Aspvreten in Sweden to 145.9 µg cm^{-2} month in Athens. The spread is good, but two sites have high, Riga = 57.2 µg cm^{-2} month and very high (Athens) values.

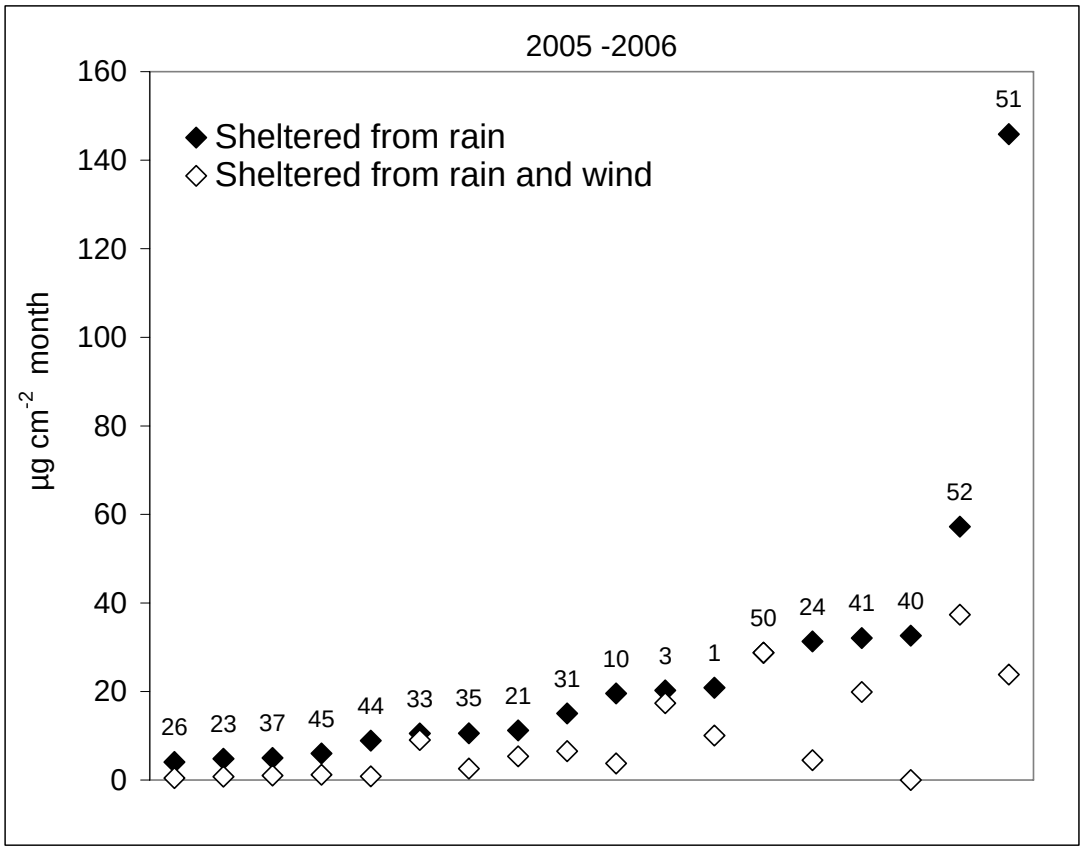

Figure 8: The spread in the yearly mean particle deposition at the test sites for the test period for ICP Materials.

Error! Reference source not found. 9 show the reflectance values ln (R_0/R) where R0 is the reflectance before exposure and R the reflectance after exposure for the soiled surfaces of the passive samplers, corresponding to the values for the particle deposition on the samplers in Figure 8. The relative reflectance for the rain sheltered samples values go from 0 for the site Aspvreten in Sweden to 0.12 for the traffic station in Berlin. The relative reflectance for the rain and wind sheltered samples values go from 0 for ≈ 50 % of the samples to 0.05 for Riga. The spread is good for the samples sheltered from rain, but less good with many zero values for the samples sheltered from both rain and wind. Generally, the sites showing loss of reflectance are the cities where black soot from traffic pollution is expected.

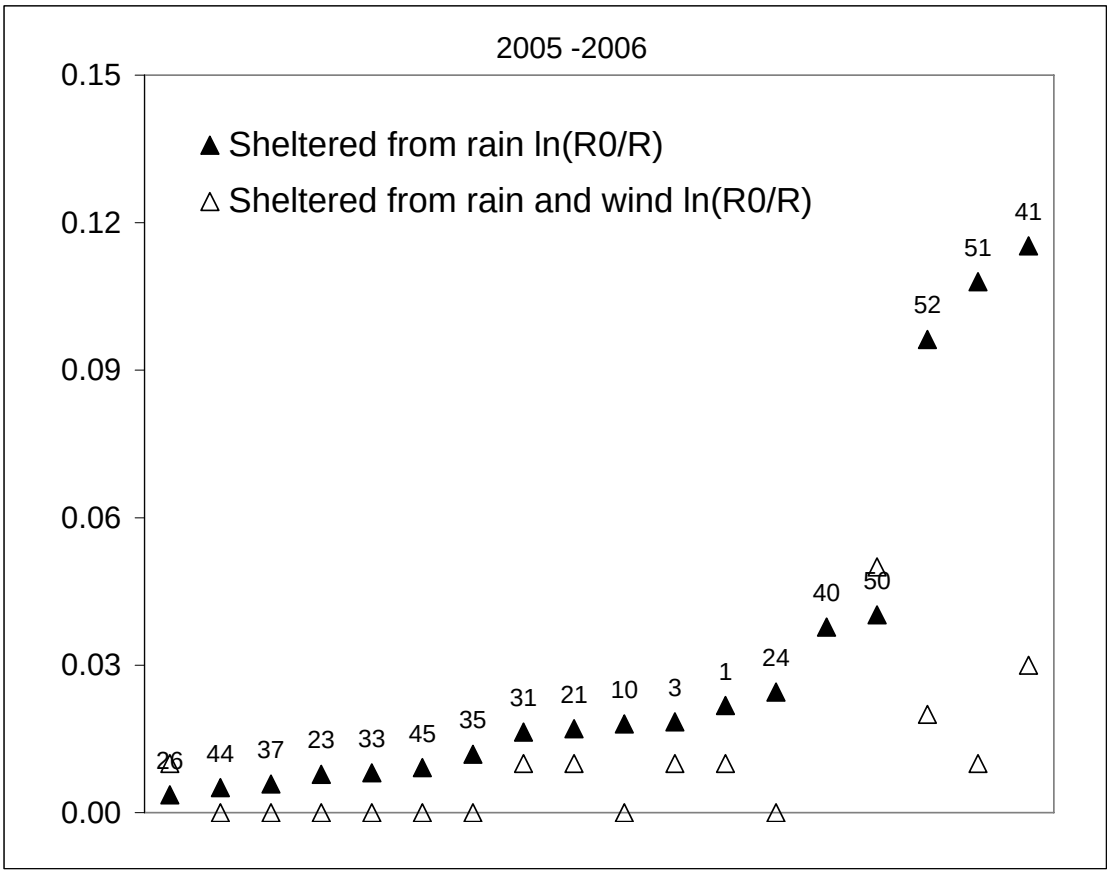

Figure 9: The spread in the yearly mean relative reflectance of the soiled sample surfaces given as ln (R_0/R) at the test sites for the test period for ICP Materials.

In **Error! Reference source not found.**10 the spread for HNO_3 concentrations in the test period is shown. The figure show yearly average values from bi-monthly sampling in a position sheltered from rain. The values go from 0.064 µg cm^{-3} at Svanvik in northern Norway to 1.18 µg cm^{-3} in Madrid. The spread is good.

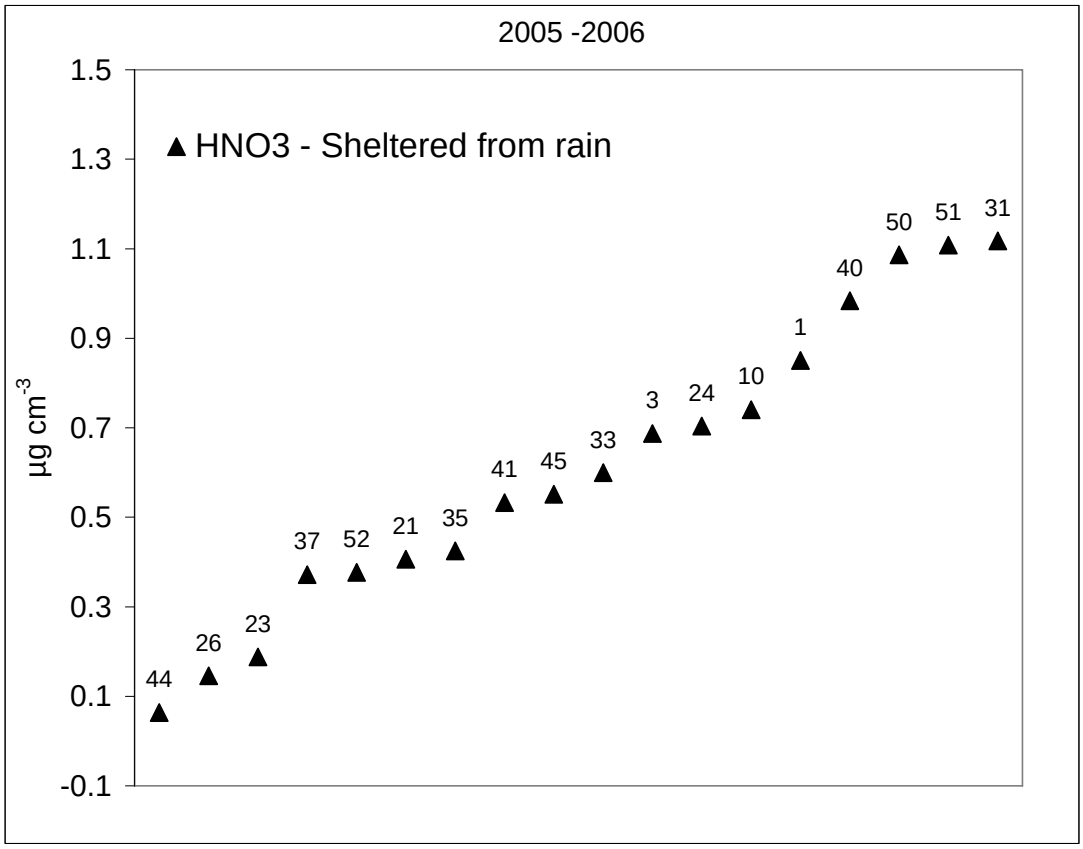

Figure 10: The spread in the yearly mean HNO_3 values for the test sites for the test period for ICP Materials.

9 Conclusions

The database obtained during the trend exposure period 2005-2006 has comparable regularity and quality as for the previous years of the ICP-materials programme. Sites belonging to the national surveillance programme and EMEP have the best regularity. Some of the urban sites have a lower regularity.

The irregularity is highest for the precipitation measurements. Precipitation quality is often not measured in cities and background sites in surveillance programmes has normally a slow quality assurance procedure. Reductions in the surveillance programmes in different countries is still a part of the problem.

The spread in the data for the different environmental parameters is sufficient for statistical dose response analyses. However data for some of the important parameters are missing for different sites. The number of sites included in the statistical treatment will therefore change depending of the selection of parameters for the analyses.

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Appendix A

Monthly values for the test sites for the exposure period

	Sampling period		Mandatory											Optional						
			Climate						Precipitation					Precipitation						Particles
Site no	Year	Month	Temp °C	RH %	SO_2 µg/m^3	NO_2 µg/m^2	O_3 µg/m^3	HNO_3 µg/m^3	Amount mm	H+ pH	SO_4 2- mgS/l	NO_3- mgN/l	Cl- mgCl/l	Cond µS/cm	NH4+ mgN/l	Na+ mgNa/l	Ca_2+ mgCa/l	Mg_2+ mgMg/l	K+ mgK/l	Conc. PM_{10} µg/m^3
01	2005	11	3.3	86	5.1	29.0	9		11.7	6.93	8.03	4.61	2.88	101.0						21.0
01	2005	12	0.4	85	5.1	29.0	14		29.0	6.93	8.03	4.61	2.88	101.0						21.0
01	2006	1	-4.6	85	19.0	56.4			13.5	7.07	8.64	5.34	3.48	94.0						21.0
01	2006	2	-1.3	81	14.0	52.9			24.2	6.52	13.80	13.70	7.70	92.0						23.0
01	2006	3	2.0	79	9.5	44.4			44.6	6.63	7.00	3.05	3.18	48.0						23.0
01	2006	4	9.5	70	9.1	40.6			45.0	6.70	7.60	6.90	1.77	50.0						23.0
01	2006	5	14.3	63	16.8	38.9			95.8	6.10	2.20	11.70	0.70	17.0						24.0
01	2006	6	18.5	63	6.7	35.3			82.6	6.20	3.10	9.20	0.35	22.0						24.0
01	2006	7	23.5	56	7.9	31.0			11.2	6.60	10.30	9.30	0.77	50.0						24.0
01	2006	8	16.6	72	15.9	29.0			106.2	5.10	2.20	6.10	0.63	15.0						13.0
01	2006	9	17.7	66	9.6	40.1			4.6	7.10	6.20	12.30	0.83	48.0						13.0
01	2006	10	11.5	77	14.5	53.1			23.0	6.50	5.80	13.20	0.70	27.0						13.0
03	2005	11	2.4	89	8.5	13.7	18		14.8	6.73	9.06	5.16	2.05	75.0						16.0
03	2005	12	-0.1	85		31.2	26		38.5	6.54	7.00	3.62	2.26	42.0						16.0
03	2006	1	-5.6	84	21.2	39.7			14.1	6.13	7.80	1.09	1.36	42.0						16.0
03	2006	2	-1.9	82	23.2	19.9			27.7	5.77	8.90	3.20	1.13	44.0						17.0
03	2006	3	1.3	78	13.5	28.0			33.5	6.26	7.60	3.50	0.45	44.0						17.0
03	2006	4	8.7	73	19.6	30.4			34.4	6.26	15.00	1.53	1.74	73.0						17.0
03	2006	5	14.0	64	13.5	21.4			43.2	6.00	5.70	8.80	1.50	19.0						18.0

	Sampling period		Mandatory											Optional							
			Climate						Precipitation					Precipitation							Particles
Site no	Year	Month	Temp °C	RH %	SO_2 µg/m^3	NO_2 µg/m^2	O_3 µg/m^3	HNO_3 µg/m^3	Amount mm	H+ pH	SO_4 2- mgS/l	NO_3- mgN/l	Cl- mgCl/l	Cond µS/cm	NH4+ mgN/l	Na+ mgNa/l	Ca_2+ mgCa/l	Mg_2+ mgMg/l	K+ mgK/l	Conc. PM_{10} µg/m^3
03	2006	6	18.5	66	28.7	21.4			84.4	5.70	4.90	6.50	0.70	19.0						18.0
03	2006	7	23.4	61	13.1	14.1			32.4	5.90	13.20	6.30	1.00	40.0						18.0
03	2006	8	13.2	77	20.9	18.8			59.5	6.10	5.50	8.20	0.62	36.0						31.0
03	2006	9	16.7	73	13.5	28.1			22.9	5.40	7.20	13.90	0.75	48.0						31.0
03	2006	10	9.5	85	22.9	35.4			36.8											31.0
10	2005	9	16.5	79	14.0	35.0	31		54.7											35.0
10	2005	10	13.6	81	17.0	35.0	20		51.7											31.0
10	2005	11	6.6	89	24.0	39.0	13		61.6	6.10	11.69	8.17	4.76	28.4	1.88	3.43	4.73	0.57	0.47	31.0
10	2005	12	3.8	90	15.0	35.0	17		37.5	5.53	11.40	7.20	9.65	40.7	3.86	4.63	1.51	0.65	0.32	28.0
10	2006	1	1.0	84	18.0		14		18.3	6.27	6.57	3.87	3.10	37.6	2.19	1.44	1.35	0.21	0.14	44.0
10	2006	2	2.3	88		39.0	24		70.8	5.29	12.08	8.25	7.49	54.6	6.12	4.56	2.60	0.74	0.30	36.0
10	2006	3	4.3	77	16.0	36.0	41		76.7	5.74	9.03	7.05	3.62	29.8	4.27	2.43	2.45	0.49	0.33	29.0
10	2006	4	9.6	70	16.0	31.0	50		67.6	6.76	13.70	7.15	6.76	60.0	10.55	1.80	3.09	0.47	0.74	29.0
10	2006	5	15.2	67	19.0	32.0	58		107.2	5.81	14.55	9.35	5.81	33.9	7.07	2.20	4.49	0.55	0.72	29.0
10	2006	6	18.1	65	11.0	26.0	65		55.2	6.21	6.60	9.87	6.21	26.4	7.34	1.60	2.13	0.41	0.60	26.0
10	2006	7	23.9	60	14.0	30.0	79		68.6	6.22	7.75	13.05	6.22	24.1	4.76	0.51	4.70	0.45	0.25	35.0
10	2006	8	16.7	78	11.0	27.0	34		125.9	5.85	13.91	10.66	5.85	21.4	5.77	3.03	5.26	0.94	0.98	21.0
10	2006	9	18.7	73	12.0	34.0	32		12.0	6.21	4.91	3.02	6.21	46.3	1.18	1.63	2.61	0.25	0.31	35.0
10	2006	10	14.5	77	24.0	34.0	22		59.9	6.51	9.01	4.57	6.51	46.4	2.75	1.46	10.62	0.43	0.51	30.0
10	2006	11	9.4	80	18.0	35.0	20		76.5	5.12	8.93	2.71	5.12	27.5	2.33	2.04	3.30	0.51	0.65	28.0

	Sampling period		Mandatory											Optional							
			Climate						Precipitation					Precipitation							Particles
Site no	Year	Month	Temp °C	RH %	SO_2 µg/m^3	NO_2 µg/m^2	O_3 µg/m^3	HNO_3 µg/m^3	Amount mm	H+ pH	SO_4 2- mgS/l	NO_3- mgN/l	Cl- mgCl/l	Cond µS/cm	NH4+ mgN/l	Na+ mgNa/l	Ca_2+ mgCa/l	Mg_2+ mgMg/l	K+ mgK/l	Conc. PM_{10} µg/m^3
10	2006	12	6.8	81	28.0		17		81.5	5.60	11.20	4.20	3.70	17.8	1.60	1.60	2.50	0.80	0.80	31.0
13	2005	1				33.0	6													
13	2005	2				30.0	7													
13	2005	3				28.0														
13	2005	4				26.0														
13	2005	5				21.0	27													
13	2005	6				18.0	28													
13	2005	7				19.0	33													
13	2005	8				16.0	28													
13	2005	9				23.0	18													
13	2005	10				23.0	8													
13	2005	11				26.0	7													
13	2005	12				37.0	7													
13	2006	1				41.0														
13	2006	2				44.0														
13	2006	3				32.0														
13	2006	4				26.0														
13	2006	5				23.0	17													
13	2006	6				24.0	20													
13	2006	7				18.0	35													

	Sampling period		Mandatory											Optional							
			Climate						Precipitation					Precipitation							Particles
Site no	Year	Month	Temp °C	RH %	SO_2 µg/m^3	NO_2 µg/m^2	O_3 µg/m^3	HNO_3 µg/m^3	Amount mm	H+ pH	SO_4 2- mgS/l	NO_3- mgN/l	Cl- mgCl/l	Cond µS/cm	NH4+ mgN/l	Na+ mgNa/l	Ca_2+ mgCa/l	Mg_2+ mgMg/l	K+ mgK/l	Conc. PM_{10} µg/m^3
13	2006	8				13.0	29														
13	2006	9				28.0	23														
13	2006	10				32.0	14														
13	2006	11				32.0	6														
13	2006	12				34.0	4														
14	2005	1			1.0	1.0	44														
14	2005	2			0.0	2.0	73														
14	2005	3			0.0	2.0	73														
14	2005	4			0.0	2.0	72														
14	2005	5			0.0	5.0	72														
14	2005	6																			
14	2005	7			0.0	13.0	69														
14	2005	8			0.0	4.0	59														
14	2005	9			0.0	3.0	60														
14	2005	10			0.0	2.0	36														
14	2005	11			1.0	2.0	34														
14	2005	12			0.0	2.0	34														
14	2006	1	5.0	68	0.0	2.0	42														
14	2006	2	6.0	69	1.0	2.0	50														
14	2006	3	9.0	72	0.0	2.0	62														

	Sampling period		Mandatory											Optional							
			Climate						Precipitation					Precipitation							Particles
Site no	Year	Month	Temp °C	RH %	SO_2 µg/m^3	NO_2 µg/m^2	O_3 µg/m^3	HNO_3 µg/m^3	Amount mm	H+ pH	SO_4 2- mgS/l	NO_3- mgN/l	Cl- mgCl/l	Cond µS/cm	NH4+ mgN/l	Na+ mgNa/l	Ca_2+ mgCa/l	Mg_2+ mgMg/l	K+ mgK/l	Conc. PM_{10} µg/m^3
14	2006	4	13.0	69	0.0	2.0	64														
14	2006	5	17.0	67	0.0	2.0	63														
14	2006	6	21.0	55	0.0	8.0	72														
14	2006	7	26.0	51	0.0	20.0	3														
14	2006	8	23.0	63	0.0	7.0	86		28.0												
14	2006	9	21.0	68	0.0	7.0	64		120.0												
14	2006	10	17.0	74	0.0	2.0	41		23.0												
14	2006	11	11.0	79					27.0												
14	2006	12	9.0	75					29.0												
15	2005	1	4.0	72	20.0	79.0	6		5.0												
15	2005	2	4.0	60	15.0	79.0	12		26.0												
15	2005	3	10.0	64	12.0	73.0	19		35.0												
15	2005	4	13.0	74	5.0	57.0	32		100.0												
15	2005	5	20.0	55	2.0	46.0	48		55.0												
15	2005	6	24.0	50	2.0	39.0	59		16.0												
15	2005	7	25.0	46	4.0	34.0	59		49.0												
15	2005	8	22.0	56	3.0	24.0	48		80.0												
15	2005	9	20.0	67	4.0	41.0	23		77.0												
15	2005	10	14.0	84	4.0	62.0	11		115.0												
15	2005	11	8.0	74	9.0	75.0	4		61.0												

	Sampling period		Mandatory											Optional							
			Climate						Precipitation					Precipitation							Particles
Site no	Year	Month	Temp °C	RH %	SO_2 µg/m^3	NO_2 µg/m^2	O_3 µg/m^3	HNO_3 µg/m^3	Amount mm	H+ pH	SO_4 2- mgS/l	NO_3- mgN/l	Cl- mgCl/l	Cond µS/cm	NH4+ mgN/l	Na+ mgNa/l	Ca_2+ mgCa/l	Mg_2+ mgMg/l	K+ mgK/l	Conc. PM_{10} µg/m^3
15	2005	12	3.0	66	13.0	86.0	5		52.0											
15	2006	1	2.3	65	17.0	102.0	2		50.0											
15	2006	2	4.0	62	15.0	93.0	5		61.0											
15	2006	3	9.0	50	9.0	65.0	19		24.0											
15	2006	4	14.0	53	4.0	18.0	28		45.0											
15	2006	5	18.0	49	4.0	59.0	42		51.0											
15	2006	6	23.0	36	5.0	57.0	58		13.0											
15	2006	7	27.0	42	2.0	54.0	70		41.0											
15	2006	8	22.0	50	2.0	33.0	52		61.0											
15	2006	9	22.0	56	5.0	66.0	35		129.0											
15	2006	10	16.0	67	4.0	88.0	13		44.0											
15	2006	11	10.0	66	6.0	76.0	13		22.0											
15	2006	12	8.0	81	8.0	62.0	12		48.0											
16	2005	1	2.9	79	6.0				27.0											
16	2005	2	3.0	70	3.0				25.0											
16	2005	3	7.0	76	2.0				8.0											
16	2005	4	12.0	77	1.0				93.0											
16	2005	5	18.0	73	2.0				51.0											
16	2005	6	22.0	69	2.0				38.0											
16	2005	7	23.0	71	2.0				68.0											

	Sampling period		Mandatory											Optional							
			Climate						Precipitation					Precipitation							Particles
Site no	Year	Month	Temp °C	RH %	SO_2 µg/m^3	NO_2 µg/m^2	O_3 µg/m^3	HNO_3 µg/m^3	Amount mm	H+ pH	SO_4 2- mgS/l	NO_3- mgN/l	Cl- mgCl/l	Cond µS/cm	NH4+ mgN/l	Na+ mgNa/l	Ca_2+ mgCa/l	Mg_2+ mgMg/l	K+ mgK/l	Conc. PM_{10} µg/m^3
16	2005	8	21.0	79	1.0				101.0											
16	2005	9	18.0	79	1.0				65.0											
16	2005	10	15.0	85	2.0				145.0											
16	2005	11	8.0	85	3.0				136.0											
16	2005	12	4.0	80	2.0				41.0											
16	2006	1	2.9	79	3.0				38.0											
16	2006	2	5.0	78	2.0				25.0											
16	2006	3	8.0	76	2.0				41.0											
16	2006	4	14.0	78	2.0				81.0											
16	2006	5	18.0	76	2.0				61.0											
16	2006	6	22.0	68	2.0				15.0											
16	2006	7	27.0	64	2.0				102.0											
16	2006	8	21.0	77	2.0				130.0											
16	2006	9	21.0	77	2.0				203.0											
16	2006	10	16.0	80	4.0				16.0											
16	2006	11	10.0	83	5.0				25.0											
16	2006	12	7.0	82	3.0				55.0											
21	2005	10	7.3	83					84.2											
21	2005	11	4.2	82	1.0	42.1			116.2											
21	2005	12	-1.6	83	1.3	45.8			40.3											

	Sampling period		Mandatory											Optional							
			Climate						Precipitation					Precipitation							Particles
Site no	Year	Month	Temp °C	RH %	SO_2 µg/m^3	NO_2 µg/m^2	O_3 µg/m^3	HNO_3 µg/m^3	Amount mm	H+ pH	SO_4 2- mgS/l	NO_3- mgN/l	Cl- mgCl/l	Cond µS/cm	NH4+ mgN/l	Na+ mgNa/l	Ca_2+ mgCa/l	Mg_2+ mgMg/l	K+ mgK/l	Conc. PM_{10} µg/m^3
21	2006	1	-2.6	85	1.6	43.8			39.6											
21	2006	2	-3.5	80	2.7	6.9			63.7											
21	2006	3	-3.5	70	1.7	34.7			50.0											
21	2006	4	4.7	73	0.9	25.4			53.4											
21	2006	5	11.9	58	1.5	18.9			77.4											
21	2006	6	16.0	62	1.8	18.1			57.6											
21	2006	7	20.2	62	1.1	21.0			36.8											
21	2006	8	18.0	72	0.7	21.2			113.8											
21	2006	9	14.8	77		26.2			57.1											
21	2006	10	8.2	86	-0.5	18.1			163.2											
23	2005	10	7.1	88	0.3	2.5	39	0.08	149.9	4.81	0.40	0.49	1.09	17.4	0.43	0.59	0.15	0.07	0.05	3.7
23	2005	11	2.7	89	0.2	1.9	44	0.02	221.7	4.63	0.52	0.38	3.31	26.6	0.25	1.84	0.09	0.22	0.08	2.5
23	2005	12	-0.8	82	0.2	1.3	48	0.03	75.2	4.32	0.88	0.55	3.09	37.6	0.43	1.84	0.09	0.22	0.09	1.4
23	2006	1	-3.0	89	0.5	3.4	49	0.12	167.0	4.47	0.58	0.69	1.42	26.0	0.54	0.78	0.09	0.09	0.06	
23	2006	2	-2.7	85	0.7	2.3	59	0.06	187.6	4.43	0.61	0.71	1.63	29.1	0.71	0.91	0.06	0.11	0.07	
23	2006	3	-3.5	76	0.6	1.3	78	0.07	70.7	4.66	0.26	0.37	1.01	15.5	0.15	0.55	0.05	0.06	0.04	
23	2006	4	3.0	81	0.3	1.1	76	0.04	107.3	4.72	0.55	0.53	1.49	21.5	0.54	0.83	0.13	0.10	0.08	
23	2006	5	9.5	68	0.4	1.1	78	0.16	121.8	4.75	0.42	0.42	0.73	17.0	0.51	0.47	0.05	0.06	0.13	
23	2006	6	14.1	67	0.6	1.3	71	0.27	38.8	4.62	0.69	0.63	3.17	31.2	0.46	1.86	0.22	0.24	0.12	
23	2006	7	18.0	67	0.1	1.5	72	0.14	48.7	4.86	0.34	0.36	0.55	13.7	0.39	0.36	0.07	0.05	0.07	

	Sampling period		Mandatory											Optional							
			Climate						Precipitation					Precipitation							Particles
Site no	Year	Month	Temp °C	RH %	SO_2 µg/m^3	NO_2 µg/m^2	O_3 µg/m^3	HNO_3 µg/m^3	Amount mm	H+ pH	SO_4 2- mgS/l	NO_3- mgN/l	Cl- mgCl/l	Cond µS/cm	NH4+ mgN/l	Na+ mgNa/l	Ca_2+ mgCa/l	Mg_2+ mgMg/l	K+ mgK/l	Conc. PM_{10} µg/m^3
23	2006	8	15.3	78	0.4	1.0	56	0.10	216.1	5.08	0.16	0.18	0.35	8.2	0.15	0.19	0.05	0.03	0.02	
23	2006	9	13.4	82	0.4	1.7	57	0.09	125.7	4.77	0.37	0.56	0.49	15.7	0.42	0.31	0.17	0.04	0.03	14.4
23	2006	10	8.5	88	1.4	1.3	44	0.04	242.5	4.77	0.27	0.30	1.74	17.5	0.36	1.05	0.11	0.13	0.06	7.8
23	2006	11	4.5	87	1.4	1.7	51	0.02	259.1	4.73	0.48	0.43	3.81	27.9	0.27	2.11	0.13	0.27	0.11	6.5
23	2006	12	3.2	89	0.8	1.0	54	0.01	252.9	4.87	0.44	0.23	5.23	28.5	0.18	2.91	0.14	0.38	0.13	7.0
24	2005	10	9.0	81																
24	2005	11	8.8	88																
24	2005	12																		
24	2006	1	-3.0	78																
24	2006	2	-2.7	83																
24	2006	3	-2.9	76																
24	2006	4	5.1	72																
24	2006	5	11.1	63																
24	2006	6	16.5	61																
24	2006	7	20.3	61																
24	2006	8	18.9	73																
24	2006	9	15.4	76																
24	2006	10	9.9	85																
24	2006	11	5.0	86																
24	2006	12	4.9	83																

	Sampling period		Mandatory											Optional							
			Climate						Precipitation					Precipitation							Particles
Site no	Year	Month	Temp °C	RH %	SO_2 µg/m^3	NO_2 µg/m^2	O_3 µg/m^3	HNO_3 µg/m^3	Amount mm	H+ pH	SO_4 2- mgS/l	NO_3- mgN/l	Cl- mgCl/l	Cond µS/cm	NH4+ mgN/l	Na+ mgNa/l	Ca_2+ mgCa/l	Mg_2+ mgMg/l	K+ mgK/l	Conc. PM_{10} µg/m^3	
26	2005	10	6.7	90			50														
26	2005	11	3.2	93			42														
26	2005	12	-0.9	90			43														
26	2006	1	-3.5	87			52														
26	2006	2	-3.6	87			67														
26	2006	3	-4.6	80			81														
26	2006	4	3.8	83			85														
26	2006	5	8.8	76			92														
26	2006	6	14.6	75			79														
26	2006	7	18.6	75			79														
26	2006	8	16.9	83			69														
26	2006	9	13.5	86			60														
26	2006	10	9.0	91			44														
26	2006	11	3.6	91			51														
31	2005	11	8.0	72	1.0	30.0	17		52.0	6.00	0.29	0.24	0.18	6.7	0.19	0.08	0.40	0.05	0.09		
31	2005	12	6.0	71	0.5	31.0	17		33.0	6.28	0.33	0.16	0.46	6.6	0.25	0.27	0.43	0.06	0.14		
31	2006	1	5.0	77	1.0	61.0	19		31.0	6.06	0.43	0.36	0.21	11.3	0.54	0.19	0.49	0.03	0.11		
31	2006	2	6.0	66	3.0	11.0	39		43.0	6.20	0.51	0.31	0.60	11.1	0.36	0.42	0.47	0.06	0.10		
31	2006	3	11.0	67	1.0	18.0	57		64.0	6.39	0.36	0.20	0.52	10.5	0.64	0.28	0.42	0.04	0.06		

	Sampling period		Mandatory										Optional						
			Climate					Precipitation					Precipitation						Particles
Site no	Year	Month	Temp °C	RH %	SO_2 µg/m^3	NO_2 µg/m^2	O_3 µg/m^3	HNO_3 µg/m^3	Amount mm	H+ pH	SO_4 2- mgS/l	NO_3- mgN/l	Cl- mgCl/l	Cond µS/cm	NH4+ mgN/l	Na+ mgNa/l	Ca_2+ mgCa/l	Mg_2+ mgMg/l	K+ mgK/l	Conc. PM_{10} µg/m^3
31	2006	4	14.0	58	1.0	16.0	63		34.0	6.42	0.28	0.28	0.35	10.2	0.42	0.23	0.57	0.06	0.05	
31	2006	5	20.0	43	1.0	22.0	64		6.0	7.03	1.06	1.02	0.55	35.3	1.02	0.30	3.82	0.13	0.11	
31	2006	6	24.0	35	1.0	11.0	49		14.0	7.43	1.02	0.65	0.81	47.9	0.66	0.60	7.18	0.25	0.23	
31	2006	7	27.0	32	3.0	5.0	78		15.0	6.99	0.94	0.64	0.36	26.9	0.69	0.23	3.03	0.23	0.12	
31	2006	8	24.0	36	3.0	5.0	82		0.0											
31	2006	9	22.0	47	2.0	29.0	60		14.0	7.11	1.31	1.57	0.62	46.4	0.77	0.33	6.35	0.33	0.15	
31	2006	10	17.0	69	2.0	19.0	42		93.0	6.40	0.20	0.21	0.33	6.5	0.25	0.33	0.58	0.06	0.08	
33	2005	12	3.2	83	1.1	4.4	68		63.6	6.28	0.39	0.41	0.65	13.2	0.41	0.49	0.61	0.08	0.11	
33	2006	1	1.7	92	0.9	6.2	67		18.8	6.27	1.16	0.90	0.69	33.4	1.75	0.52	0.83	0.13	0.17	
33	2006	2	3.6	81	1.2	5.6	77		22.2	6.14	0.70	0.72	1.19	25.5	1.09	0.59	0.46	0.07	0.10	
33	2006	3	7.3	80	0.7	2.6	79		61.0	6.39	0.65	0.48	1.54	20.3	0.53	0.60	0.68	0.10	0.09	
33	2006	4	10.5	73	0.8	3.5	90		51.8	6.38	0.56	0.42	1.32	18.1	0.59	0.92	0.62	0.15	0.15	
33	2006	5	15.9	56	0.9	3.4	98		37.6	6.68	1.02	0.86	0.57	30.3	1.13	0.69	2.31	0.19	0.27	
33	2006	6	19.1	57	0.6	5.1	104		24.0	7.02	0.97	0.79	0.93	40.6	0.75	0.65	4.75	0.28	0.45	
33	2006	7	23.3	37	1.0	2.5	108		5.2	6.93	1.67	1.44	1.15	64.2	1.20	1.15	8.20	0.50	0.45	
33	2006	8	20.9	43	1.4	3.9	101		4.4	6.78	1.09	1.27	1.55	46.5	0.28	1.00	4.75	0.69	0.30	
33	2006	9	17.8	58	0.9	3.5	90		23.8	6.46	0.49	0.46	0.58	14.4	0.27	0.47	1.69	0.15	0.14	
33	2006	10	13.6	74					252.6	5.97	0.24	0.11	0.43	6.8	0.08	0.29	0.34	0.05	0.09	
33	2006	11	8.6	92					124.4	5.94	0.25	0.14	0.46	7.1	0.18	0.27	0.29	0.04	0.11	
33	2006	12	3.4	86					49.0	5.81	0.23	0.16	0.36	7.0	0.17	0.29	0.26	0.04	0.13	

	Sampling period		Mandatory											Optional							
			Climate						Precipitation					Precipitation							Particles
Site no	Year	Month	Temp °C	RH %	SO_2 µg/m^3	NO_2 µg/m^2	O_3 µg/m^3	HNO_3 µg/m^3	Amount mm	H+ pH	SO_4 2- mgS/l	NO_3- mgN/l	Cl- mgCl/l	Cond µS/cm	NH4+ mgN/l	Na+ mgNa/l	Ca_2+ mgCa/l	Mg_2+ mgMg/l	K+ mgK/l	Conc. PM_{10} µg/m^3
35	2005	11	2.4		1.7	3.9	42		39.3	4.43	0.32	0.25	0.61	13.3	0.27	0.40	0.23	0.07	0.05	
35	2005	12	-3.9		4.1	5.2	43		29.4	3.11	0.20	0.14	0.52	131.3	0.09	0.20	0.19	0.02	0.04	
35	2006	1			8.3	4.8	51		9.8	4.33	0.58	0.43	0.95	35.7	0.28	0.32	0.42	-0.10	0.19	
35	2006	2			10.4	6.1	65		24.8	4.86	0.22	0.27	0.22	7.5	-0.08	-0.10	0.30	-0.10	-0.10	
35	2006	3			11.0	5.6	81		37.9	4.73	0.20	0.29	0.24	8.0	0.09	0.14	0.24	-0.10	-0.10	
35	2006	4			2.6	3.4	91		15.9	4.98	0.48	0.61	0.52	10.0	0.49	0.26	0.44	-0.10	0.12	
35	2006	5			4.0	3.0	83		33.1	5.22	0.39	0.33	0.45	10.2	0.50	0.21	0.68	-0.10	0.52	
35	2006	6			0.9	2.4	69		23.6	5.40	0.26	0.25	0.26	10.7	0.12	0.11	0.87	0.11	0.20	
35	2006	7			1.4	1.9	68		0.5		0.34	0.01	0.29		0.05	0.64	2.48	0.19	0.40	
35	2006	8			1.9	2.7	59		65.4	5.61	0.36	0.08	0.08	9.3	0.11	0.07	0.53	0.04	0.03	
35	2006	9			0.7	2.3	52		13.5	5.53	0.27	0.02	0.33	3.8	0.01	0.19	0.42	0.04	0.03	
35	2006	10			0.8	2.5	37		109.6	4.94	0.25	0.20	0.45	9.9	0.15	0.41	0.22	0.05	0.06	
35	2006	11			0.6	3.3	44		48.5	4.73	0.39	0.27	0.79	11.5	0.15	0.55	0.18	0.09	0.07	
40	2005	10	16.0	78	6.4	47.0	20		21.2												26.2
40	2005	11	7.2	82	9.4	45.0	13		27.4												19.6
40	2005	12	4.6	81	12.6	50.0	13		28.2												19.4
40	2006	1	3.7	80	11.1	51.9	10		31.4												26.0
40	2006	2	4.1	81	11.0	52.5	20		59.8												27.4
40	2006	3	6.8	73	8.1	43.0	38		73.0	7.40	1.26	0.57	2.63								22.2

	Sampling period		Mandatory											Optional							
			Climate						Precipitation					Precipitation							Particles
Site no	Year	Month	Temp °C	RH %	SO_2 µg/m^3	NO_2 µg/m^2	O_3 µg/m^3	HNO_3 µg/m^3	Amount mm	H+ pH	SO_4 2- mgS/l	NO_3- mgN/l	Cl- mgCl/l	Cond µS/cm	NH4+ mgN/l	Na+ mgNa/l	Ca_2+ mgCa/l	Mg_2+ mgMg/l	K+ mgK/l	Conc. PM_{10} µg/m^3
40	2006	4	11.7	64	6.2	35.0	57		25.2	6.20	2.12	1.65	1.80							18.6
40	2006	5	15.7	72	4.2	30.8	54		57.4	7.35	2.99	0.83	7.43							17.6
40	2006	6	19.7	61	3.1	31.3	72		23.6	5.05	3.73	-0.23	3.70							25.2
40	2006	7	24.7	59	2.9	27.9	80		55.8	7.60	4.16	-0.23	1.50							27.3
40	2006	8	18.2	72	2.4	23.5	44		101.6	6.75	0.86	-0.23	1.21							15.9
40	2006	9	19.8	71	4.5	41.5	40		42.4	8.15	47.87	-0.23	84.12							25.8
40	2006	10	15.5	80	3.7	39.8	21		45.2	6.75	1.05	-0.23	3.78							23.3
44	2005	10	3.3	81	0.5		58		75.6											
44	2005	11	-1.6	89	3.2	2.0	57		72.4											
44	2005	12	-10.0	87	19.9	3.8	61		44.5											
44	2006	1	-9.5	82	0.8	3.8	68		19.8											
44	2006	2	-13.0	80	4.4	3.5	75		26.7											
44	2006	3	-10.2	77	9.8	1.9	84		42.9											
44	2006	4	1.6	71	11.9	0.9	99		36.9											
44	2006	5	5.6	66	8.9	0.6	84		76.7											
44	2006	6	11.5	66	1.5	0.8	68		83.4											
44	2006	7	12.2	72	3.2	0.8	52		151.4											
44	2006	8	12.4	78	9.9	0.9	44		35.8											
44	2006	9	6.2	80	2.3		53		51.6											
44	2006	10	-1.3	85	7.2		56		69.3											

	Sampling period		Mandatory											Optional							
			Climate						Precipitation					Precipitation							Particles
Site no	Year	Month	Temp °C	RH %	SO_2 µg/m^3	NO_2 µg/m^2	O_3 µg/m^3	HNO_3 µg/m^3	Amount mm	H+ pH	SO_4 2- mgS/l	NO_3- mgN/l	Cl- mgCl/l	Cond µS/cm	NH4+ mgN/l	Na+ mgNa/l	Ca_2+ mgCa/l	Mg_2+ mgMg/l	K+ mgK/l	Conc. PM_{10} µg/m^3
44	2006	11	-7.2	84	3.2		56													
44	2006	12	-4.0	84	10.6		64													
45	2005	10	9.6	81	1.0	8.6	70		53.2	5.05	0.16	0.17	0.09	6.5	0.15	0.05	0.08	0.01	0.02	
45	2005	11	1.5	80	1.5	7.5	62		47.3	5.07	0.17	0.20	0.42	8.9	0.12	0.29	0.20	0.04		
45	2005	12	-4.1	90	2.2	8.7	59		80.9	5.00	0.09	0.14	0.18	6.2	0.09	0.10	0.04	0.01	0.01	
45	2006	1	-2.5	79	1.8	8.4	75		46.6	4.72	0.57	0.31	0.09	11.8	0.85	0.04	0.07	0.01	0.02	
45	2006	2	-2.7	83	1.5	11.6	72		164.3	5.06	0.35	0.17	0.15	6.8	0.70	0.09	0.05	0.01	0.02	
45	2006	3	-0.6	85	1.2	9.1	91		140.1	5.05	0.25	0.18	0.13	6.4	0.60	0.08	0.05	0.01	0.01	
45	2006	4	4.9	78	0.8	6.1	97		142.9	5.22	0.41	0.23	0.07	9.8	2.04	0.04	0.10	0.01	0.05	
45	2006	5	9.2	78	0.4	4.1	95		162.1	5.43	0.59	0.25	0.10	7.7	1.26	0.05	0.23	0.03	0.15	
45	2006	6	14.1	71	0.8	5.4	112		72.5	6.53	0.93	0.31	0.18	13.7	1.65	0.13	1.39	0.10	0.08	
45	2006	7	18.8	69	0.8	5.3	129		154.9	5.44	0.61	0.31	0.08	10.0	1.99	0.05	0.37	0.03	0.06	
45	2006	8	10.9	84	0.3	3.6	82		127.9	5.13	0.41	0.21	0.11	7.0	0.84	0.09	0.11	0.01	0.02	
45	2006	9	14.0	83	0.8	6.4	83		189.6	5.05	0.49	0.19	0.04	7.5	0.88	0.03	0.12	0.01	0.02	
45	2006	10	10.3	81	0.6	6.8	70		74.6	5.22	0.35	0.14	0.07	5.3	0.58	0.05	0.09	0.01	0.04	
50	2005	10	9.0	79	33.0	32.0	25		16.3											55.0
50	2005	11	2.1	86	42.0	47.0	13		44.4											59.0
50	2005	12	-1.9	92	47.0	37.0	17		90.9											53.0
50	2006	1	-7.7	88	89.0	61.0	11		20.4											118.0

	Sampling period		Mandatory											Optional							
			Climate						Precipitation					Precipitation							Particles
Site no	Year	Month	Temp °C	RH %	SO_2 µg/m^3	NO_2 µg/m^2	O_3 µg/m^3	HNO_3 µg/m^3	Amount mm	H+ pH	SO_4 2- mgS/l	NO_3- mgN/l	Cl- mgCl/l	Cond µS/cm	NH4+ mgN/l	Na+ mgNa/l	Ca_2+ mgCa/l	Mg_2+ mgMg/l	K+ mgK/l	Conc. PM_{10} µg/m^3
50	2006	2	-3.7	87	50.0	45.0	29		22.3											67.0
50	2006	3	-0.4	81	44.0	49.0	41		49.8											55.0
50	2006	4	8.8	67	24.0	53.0	50		38.5											45.0
50	2006	5	13.0	64	24.0	56.0	56		76.8											37.0
50	2006	6	17.2	65	27.0	29.0	59		81.5											45.0
50	2006	7	21.9	52	25.0	39.0	68		35.9											50.0
50	2006	8	15.9	78	12.0	29.0	52		115.9											54.0
50	2006	9	15.3	74	16.0	42.0	30		81.1											58.0
51	2005	10	19.4	66	9.7	72.1	19		3.5											58.0
51	2005	11	15.2	73	28.0	71.0	10		167.0											59.0
51	2005	12	13.6	71	31.0	66.6	8		4.8											49.0
51	2006	1	7.5	77	37.0	66.0	13		61.3											46.0
51	2006	2	9.9	75	43.0	70.0	12		50.5											77.0
51	2006	3	12.9	74	23.0	67.0	14		56.3											49.0
51	2006	4	17.1	68	19.0	68.0	28		15.8											61.0
51	2006	5	21.8	68	15.0	75.0	29		0.0											58.0
51	2006	6	26.1	67	11.0	68.0	23		8.0											56.0
51	2006	7	28.1	61	7.0	61.0	43		7.0											47.0
51	2006	8	30.2	65	8.0	62.0	25		0.0											51.0
51	2006	9			9.0	67.0	21													48.0

	Sampling period		Mandatory											Optional							
			Climate						Precipitation					Precipitation							Particles
Site no	Year	Month	Temp °C	RH %	SO_2 µg/m^3	NO_2 µg/m^2	O_3 µg/m^3	HNO_3 µg/m^3	Amount mm	H+ pH	SO_4 2- mgS/l	NO_3- mgN/l	Cl- mgCl/l	Cond µS/cm	NH4+ mgN/l	Na+ mgNa/l	Ca_2+ mgCa/l	Mg_2+ mgMg/l	K+ mgK/l	Conc. PM_{10} µg/m^3
51	2006	10			6.0	62.0	15													52.0
51	2006	11			34.0	79.0	8													67.0
51	2006	12			41.0	70.0	7													65.0
					SO42- (mg S/m2)	NO3- (mg N/m2)														
52	2005	10	7.9	82	26.9	18.6	18		48.1	6.20	0.36	0.26	1.51	16.2	0.07	1.34	0.83	0.29	0.37	48.1
52	2005	11	3.1	86	34.8	29.6	14		54.7	6.28	0.63	0.56	1.00	22.2	0.52	0.64	1.22	0.39	0.18	46.2
52	2005	12	-2.1	89	19.9	20.1	13		47.9	5.70	0.42	0.40	1.07	16.6	0.46	0.72	0.61	0.17	0.17	37.3
52	2006	1	-6.3	82	9.0	6.7	20		15.4	6.38	0.45	0.33	2.16	20.3	0.33	1.43	0.91	0.24	0.28	38.1
52	2006	2	-6.6	83	19.5	13.7	27		36.5	6.79	1.08	0.76	3.62	87.5	0.85	2.63	1.98	0.37	0.36	62.4
52	2006	3	-2.8	75	20.8	21.0	26		26.3	6.48	0.84	0.86	3.42	42.6	0.87	3.41	1.63	0.46	0.53	57.9
52	2006	4	6.5	64	12.8	13.4	20		27.3	7.03	0.38	0.39	0.51	63.4	1.18	0.34	0.91	0.34	0.13	68.8
52	2006	5	11.9	60	42.5	18.0	12		47.9	7.01	0.73	0.30	0.94	53.1	1.06	0.74	1.16	0.50	0.70	58.3
52	2006	6	16.6	67	23.6	14.0	12		67.0	6.90	0.42	0.26	0.20	70.4	0.66	1.49	2.43	0.64	2.02	41.3
52	2006	7	20.7	61	8.6	6.3	23		9.7	7.29	0.67	0.51	1.14		0.44	2.63	3.34	1.02	0.85	54.1
52	2006	8	18.2	76	40.7	24.5	7		116.6	6.54	0.41	0.24	0.30	14.3	0.33	0.57	0.68	0.19	0.19	42.3
52	2006	9	14.8	82	21.3	12.7	9		45.4	7.12	0.43	0.26	2.46	40.7	0.42	3.11	2.50	0.55	0.73	43.6
52	2006	10	9.7	85	22.3	15.7	11		50.6	6.70	0.61	0.42	1.86	24.4	0.22	1.23	1.34	0.39	1.03	48.5

Appendix B

Yearly average values for the test sites for the exposure period.

		Mandatory																Optional						
		Climate										Precipitation					Particles	Precipitation						Particles
Site no	Sampling period Year	Temp °C	RH %	SO_2 µg/m^3	IVL-passive SO_2 µg/m^3	NO_2 µg/m^2	IVL-passive NO_2 µg/m^3	O_3 µg/m^3	IVL-passive O_3 µg/m^3	HNO_3 µg/m^3	IVL-passive HNO_3 µg/m^3	Amount mm	H+ pH	SO_4 2- mgS/l	NO_3- mgN/l	Cl- mgCl/l	IVL passive sampler µg cm^{-2} month	Cond µS/cm	NH4+ mgN/l	Na+ mgNa/l	Ca_2+ mgCa/l	Mg_2+ mgMg/l	K+ mgK/l	Conc. PM_{10} µg/m^3
1	05/06	9.3	74	11.1		40.0		12			0.85	491.4	5.69	4.90	8.20	1.55	20.8	37.5						20.2
3	05/06	8.3	76	18.1		25.2		22			0.69	442.2	5.91	7.67	5.99	1.12	20.3	38.2						20.5
10	05/06	11.2	76	16.4		33.0		37			0.75	761.3	5.83	11.23	8.60	6.00	19.5	35.4	5.48	2.48	4.21	0.58	0.56	31.1
13	05/06					28.7		19																
14	05/06	15.8	66	0.1		4.8		51																
15	05/06	14.0	56	7.4		66.3		28				632.0												
16	05/06	13.9	76	2.3								889.0												
21	05/06	7.2	74	1.3		26.9			36		0.41	869.1					11.2							
23	05/06	6.2	79	0.5		1.6		61		0.09	0.19	1623.1	4.64	0.44	0.45	1.57	4.8	20.9	0.37	0.89	0.09	0.11	0.06	6.5
24	05/06	8.9	74		1.8		13.1		58		0.70						31.3							
26	05/06	6.3	84		0.6		2.1	66	44		0.15						4.1							
31	05/06	15.3	56	1.6		21.5		49			1.12	399.0	6.29	0.41	0.33	0.40	15.1	12.4	0.41	0.28	1.07	0.08	0.09	
33	05/06	12.1	69	0.9		4.1		88			0.60	689.4	6.11	0.45	0.33	0.70	10.5	14.2	0.38	0.45	0.82	0.09	0.13	
35	05/06	-0.8		4.0		3.7		62			0.43	402.8	4.16	0.29	0.22	0.38	10.6	19.2	0.18	0.24	0.37	0.05	0.10	
37	05/06				1.3		1.7		53		0.37						5.0							
40	05/06	12.6	73	6.6		39.3		38			0.98	571.0	6.21	6.60	0.38	11.07	32.6							22.4
41	05/06										0.53						32.1							
44	05/06	0.3	78	6.9		1.9		67	54		0.06	711.4					8.9							
45	05/06	6.2	80	1.1		6.9		86			0.55	1403.7	5.15	0.44	0.22	0.11	6.0	8.1	1.06	0.07	0.20	0.02	0.05	
50	05/06	7.5	76	36.1		43.2		38			1.09	673.8					28.7							58.0
51	05/06	18.3	70	20.1		67.8		20			1.11	374.2					145.9							54.9
52	05/06	7.0	76		1.8		21.4	16	43		0.38	545.3	6.42	0.55	0.39	1.26	57.2	38.0	0.57	1.32	1.40	0.39	0.62	49.9

Appendix C
Two month's mean values for particle deposition and HNO_3 concentration for the exposure period.

Table 1: Particle deposition on IVL passive samplers sheltered from rain. Bi-monthly samples (µg cm^{-2} $month^{-1}$)

				µg cm^{-2} $Month^{-1}$									$ln(R_0/R)$
Station	**Start**	**Stop**	**Days**	**Mass**	**Cl^-**	**NO_3^-**	**SO_4^{2-}**	**NH_4^+**	**Ca^{2+}**	**Mg^{2+}**	**Na^+**	**K^+**	**$Month^{-1}$**
Prague	08/11/2005	01/02/2006	85	21	0.72	1.00	1.83	0.17	1.60	0.02	0.51	0.08	0.02
Prague	01/02/2006	02/05/2006	90	23	0.26	1.41	1.52	0.01	1.68	0.02	0.26	0.04	0.02
Prague	02/05/2006	01/08/2006	91	24	0.04	1.03	0.50	0.03	0.91	0.02	0.05	0.10	0.01
Prague	01/08/2006	08/11/2006	99	13	0.12	0.51	0.32	0.05	0.43	0.03	0.08	<0.03	0.04
Kopisty	15/11/2005	01/02/2006	78	16	0.23	0.60	1.05	0.16	0.37	0.02	0.27	0.09	0.03
Kopisty	01/02/2006	02/05/2006	90	17	0.04	0.45	1.03	0.02	0.33	0.02	0.12	0.06	0.02
Kopisty	02/05/2006	31/07/2006	90	18	0.03	0.28	0.45	0.10	0.13	0.04	<0.03	0.14	0.02
Kopisty	31/07/2006	13/10/2006	74	31	0.08	1.15	1.19	0.11	0.62	0.06	0.28	0.13	0.01
Bottrop	21/11/2005	31/01/2006	71	16	0.77	0.34	1.59	0.02	0.58	0.07	0.64	0.04	0.03
Bottrop	31/01/2006	31/03/2006	59	21	0.44	0.58	1.50	0.12	0.72	0.06	0.44	0.04	0.03
Bottrop	31/03/2006	31/05/2006	61	22	0.15	0.51	0.85	0.05	0.52	0.05	0.15	0.11	0.01
Bottrop	31/05/2006	01/08/2006	62	17	0.06	0.74	0.57	0.03	0.58	0.04	0.07	0.06	0.00
Bottrop	01/08/2006	30/09/2006	60	13	0.04	0.66	0.81	0.06	0.48	0.05	0.15	0.12	0.01
Bottrop	30/09/2006	02/12/2006	63	28	2.58	0.62	1.92	0.14	0.71	0.21	1.57	0.11	0.03
Oslo	24/10/2005	02/01/2006	70	6	0.14	0.07	0.33	0.01	0.15	0.01	0.11	<0.02	0.01
Oslo	02/01/2006	28/02/2006	57	8	0.18	0.34	0.53	0.10	0.18	0.02	0.24	<0.04	0.01
Oslo	28/02/2006	02/05/2006	63	15	0.35	0.41	0.41	0.03	0.28	0.04	0.35	<0.04	0.04
Oslo	02/05/2006	29/06/2006	58	17	0.10	0.56	0.23	0.01	0.22	0.02	0.10	0.12	
Oslo	29/06/2006	31/08/2006	63	14	0.10	1.26	0.43	0.07	0.49	0.20	0.05	0.43	0.02
Oslo	31/08/2006	27/10/2006	57	8	0.05	0.44	0.28	0.05	0.24	0.03	0.06	0.05	0.01

				µg cm^{-2} Month^{-1}									ln(R_0/R)
Station	**Start**	**Stop**	**Days**	**Mass**	**Cl^-**	**NO_3^-**	**SO_4^{2-}**	**NH_4^+**	**Ca^{2+}**	**Mg^{2+}**	**Na^+**	**K^+**	**Month^{-1}**
Birkenes	19/10/2005	01/01/2006	74	8	1.00	0.29	0.33	0.02	0.27	0.08	0.67	0.04	0.00
Birkenes	01/01/2006	01/02/2006	31	1	0.40	0.44	0.31	0.04	0.55	0.05	0.32	<0.05	0.01
Birkenes	01/02/2006	01/03/2006	28	3	0.05	0.09	0.09	<0.02	0.10	<0.02	<0.10	<0.04	0.01
Birkenes	01/03/2006	06/05/2006	66	2	0.07	0.11	0.13	0.01	0.11	0.01	0.07	<0.03	0.00
Birkenes	01/05/2006	01/07/2006	61	8	0.09	0.26	0.14	0.01	0.09	0.01	0.10	0.10	0.00
Birkenes	01/07/2006	01/09/2006	62	6	0.05	0.36	0.19	0.02	0.13	0.03	0.08	0.04	0.01
Birkenes	01/09/2006	01/11/2006	61	3	0.34	0.89	0.27	0.06	0.37	0.07	0.28	<0.03	0.01
Stockholm	21/11/2005	03/01/2006	43	14	0.41	0.51	0.33	0.12	0.21	0.02	0.36	0.06	0.01
Stockholm	03/01/2006	02/03/2006	58	14	0.97	0.87	0.78	0.23	0.29	0.03	0.81	<0.05	0.03
Stockholm	02/03/2006	02/05/2006	61	40	0.41	1.67	0.99	0.25	0.84	0.06	0.58	0.05	0.06
Stockholm	02/05/2006	03/07/2006	62	61	0.21	1.34	0.82	0.04	0.81	0.07	0.33	0.26	0.02
Stockholm	03/07/2006	04/09/2006	63	26	0.25	1.43	0.70	0.04	0.70	0.08	0.33	0.07	0.02
Stockholm	04/09/2006	22/11/2006	79	27	0.82	0.76	0.63	0.05	0.46	0.07	0.57	0.04	0.02
Aspvreten	01/11/2005	03/01/2006	63	-1	0.03	0.14	0.10	0.10	0.12	0.01	<0.03	<0.01	0.00
Aspvreten	03/01/2006	02/03/2006	58	3	0.13	0.11	0.09	0.04	0.08	<0.01	0.12	<0.02	0.00
Aspvreten	02/03/2006	02/05/2006	61	4	<0.03	0.13	0.10	0.03	0.10	0.01	<0.02	<0.01	0.00
Aspvreten	02/05/2006	03/07/2006	62	8	<0.03	0.22	0.11	0.03	0.12	0.02	<0.03	0.07	0.00
Aspvreten	03/07/2006	04/09/2006	63	4	0.02	0.15	0.13	0.01	0.09	0.01	0.04	0.03	0.00
Aspvreten	04/09/2006	02/11/2006	59	4	0.03	0.37	0.15	0.02	0.16	0.03	<0.05	<0.05	0.00
Madrid	02/11/2005	02/01/2006	61	11									0.03
Madrid	02/01/2006	06/03/2006	63	13	0.38	0.49	0.41	0.28	0.82	0.02	0.30	<0.04	0.01

				µg cm^{-2} Month^{-1}									ln(R_0/R)
Station	**Start**	**Stop**	**Days**	**Mass**	**Cl^-**	**NO_3^-**	**SO_4^{2-}**	**NH_4^+**	**Ca^{2+}**	**Mg^{2+}**	**Na^+**	**K^+**	**Month^{-1}**
Madrid	06/03/2006	10/05/2006	65	14	0.09	1.10	0.45		1.17	0.03	0.15	0.04	0.03
Madrid	10/05/2006	13/07/2006	64	17	0.03	0.78	0.25	0.02	1.20	0.02	0.05	0.05	0.00
Madrid	13/07/2006	13/09/2006	62	17	0.04	0.94	0.31	0.03	1.14	0.03	0.05	0.03	0.01
Madrid	13/09/2006	02/11/2006	50	19	0.20	1.71	0.57	0.05	1.58	0.08	0.20	0.04	0.02
Toledo	20/12/2005	20/02/2006	62	10	0.47	0.45	0.30	0.29	0.33	0.04	0.35	0.05	0.00
Toledo	20/02/2006	20/04/2006	59	6	0.11	0.51	0.17	0.05	0.18	0.03	0.21	0.04	0.00
Toledo	20/04/2006	16/06/2006	57	18	0.07	0.32	0.24	0.01	0.73	0.02	0.07	0.09	0.00
Toledo	16/06/2006	17/08/2006	62	12	0.18	0.30	0.16	0.02	0.30	0.03	0.14	0.08	0.01
Toledo	17/08/2006	19/10/2006	63	12	0.23	0.59	0.20	0.04	0.37	0.06	0.20	0.16	0.01
Toledo	19/10/2006	21/12/2006	63	5	0.23	0.87	0.20	0.09	0.27	0.06	0.20	<0.04	0.01
Lahemaa	09/11/2005	03/01/2006	55	10	0.65	0.66	0.40	0.04	0.29	0.02	0.52	0.17	0.02
Lahemaa	03/01/2006	21/03/2006	77	4	0.06	0.22	0.20	0.02	0.16	0.01	0.08	0.04	0.00
Lahemaa	21/03/2006	17/05/2006	57	21	0.04	0.52	0.28	0.02	0.37	0.03	0.08	0.14	0.01
Lahemaa	17/05/2006	12/07/2006	56	18	0.06	0.56	0.31	0.03	0.34	0.04	0.08	0.18	0.01
Lahemaa	12/07/2006	07/11/2006	118	7	0.12	0.25	0.24	0.02	0.22	0.02	0.10	0.03	0.01
Dorset	24/11/2005	02/02/2006	70	2	0.02	0.26	0.19	0.14	0.17	0.01	0.10	0.05	0.00
Dorset	02/02/2006	31/03/2006	57	2	0.05	0.22	0.16	0.02	0.14	0.01	0.05	<0.02	0.00
Dorset	01/06/2006	03/08/2006	63	9	0.03	0.15	0.22	0.03	0.18	0.02	<0.02	0.04	0.01
Dorset	03/08/2006	27/10/2006	85	6	0.02	0.31	0.38	0.03	0.25	0.05	<0.03	0.03	0.00
Dorset	27/10/2006	23/11/2006	27	5	0.06	0.26	0.29	0.03	0.31	0.02	<0.14	<0.03	0.00
Paris	20/10/2005	16/12/2005	57	42	4.39	1.63	4.08	0.08	3.29	0.26	2.64	0.13	0.06

				µg cm^{-2} Month^{-1}									ln(R_0/R)
Station	**Start**	**Stop**	**Days**	**Mass**	**Cl^-**	**NO_3^-**	**SO_4^{2-}**	**NH_4^+**	**Ca^{2+}**	**Mg^{2+}**	**Na^+**	**K^+**	**Month^{-1}**
Paris	16/12/2005	22/02/2006	68	16	0.94	0.39	1.63	0.02	1.14	0.06	0.63	0.03	0.03
Paris	22/02/2006	20/04/2006	57	37	1.91	1.72	2.67	0.11	2.65	0.13	1.18	0.09	0.05
Paris	20/04/2006	20/06/2006	61	38	1.10	3.15	1.54	0.01	2.50	0.12	1.05	0.12	0.02
Paris	20/06/2006	22/08/2006	63										
Berlin	12/01/2006	20/04/2006	98	184	9.24	0.61	4.51	0.06	2.83	0.03	6.52	0.16	0.34
Berlin	20/04/2006	20/07/2006	91	66	0.21	1.38	0.60	0.02	1.41	0.04	0.23	0.22	0.05
Berlin	20/07/2006	20/10/2006	92	-186	0.20	1.50	0.63	0.05	1.50	0.07	0.13	0.11	0.02
Berlin	20/10/2006	10/01/2007	82	22	0.21	0.89	0.48	0.06	0.58	0.08	0.17	0.08	0.02
Svanvik	27/10/2005	01/01/2006	66	5	0.12	0.12	0.19	0.01	0.13	0.01	0.10	0.05	0.00
Svanvik	01/01/2006	01/03/2006	59	8	0.30	0.19	0.19	0.02	0.16	0.02	0.22	0.05	0.01
Svanvik	01/03/2006	01/04/2006	31	17	0.35	0.25	0.47	0.03	0.21	0.03	0.31	0.15	0.02
Svanvik	01/04/2006	01/05/2006	30	10	0.05	0.06	0.11	<0.01	0.20	0.01	<0.13	<0.07	0.00
Svanvik	01/05/2006	01/07/2006	61	3	0.07	0.02	0.05	<0.01	0.13	<0.01	0.05	0.03	0.00
Svanvik	01/07/2006	01/09/2006	62	17	0.19	0.27	0.44	0.03	0.16	0.05	0.19	0.18	0.00
Svanvik	01/09/2006	03/11/2006	63	7	0.28	0.24	0.25	0.04	0.13	0.03	0.20	0.10	0.00
Chaumont	19/10/2005	19/12/2005	61	1	0.02	0.19	0.13	0.06	0.42	0.02	<0.03	<0.01	0.00
Chaumont	19/12/2005	20/02/2006	63	1	0.02	0.10	0.06	0.03	0.08	0.01	<0.05	<0.01	0.00
Chaumont	20/02/2006	20/04/2006	59	3	0.02	0.19	0.12	0.05	0.12	0.01	0.04	<0.04	0.00
Chaumont	20/04/2006	19/06/2006	60	15	0.04	0.42	0.22	0.01	0.33	0.02	0.41	0.11	0.00
Chaumont	19/06/2006	21/08/2006	63	10	0.02	0.35	0.23	0.00	0.30	0.02	<0.07	0.05	0.00
Chaumont	21/08/2006	19/10/2006	59	7	0.02	0.36	0.30	0.02	0.27	0.02	<0.08	0.05	0.02

				µg cm^{-2} Month^{-1}									ln(R_0/R)
Station	**Start**	**Stop**	**Days**	**Mass**	**Cl^-**	**NO_3^-**	**SO_4^{2-}**	**NH_4^+**	**Ca^{2+}**	**Mg^{2+}**	**Na^+**	**K^+**	**Month^{-1}**
Katowice	14/12/2005	13/02/2006	61	19	1.28	0.54	1.53	0.29	0.54	0.05	0.89	0.06	0.08
Katowice	13/02/2006	18/04/2006	64	27	0.55	1.23	1.70	0.01	0.84	0.06	0.51	0.10	0.03
Katowice	18/04/2006	14/06/2006	57	28	0.18	0.56	0.72	0.05	0.66	0.05	0.06	0.14	0.03
Katowice	14/06/2006	18/08/2006	65	27	0.16	0.68	0.91	0.03	0.77	0.05	0.08	0.12	0.03
Katowice	18/08/2006	17/10/2006	60	46	0.34	1.16	1.76	0.11	1.10	0.09	0.20	0.29	0.04
Katowice	17/10/2006	24/11/2006	38	25	0.51	0.71	1.48	0.12	0.90	0.08	0.16	0.16	0.03
Athens	07/11/2005	09/01/2006	63	252	40.58	2.53	34.46	0.39	18.12	2.91	29.7	0.97	0.27
Athens	17/01/2006	20/03/2006	62	171	13.50	2.06	16.53	0.20	8.92	0.91	8.11	0.36	0.12
Athens	20/03/2006	19/05/2006	60	101	4.66	5.71	3.37	0.06	5.03	0.39	3.01	0.28	0.05
Athens	19/05/2006	20/07/2006	62	93	5.61	4.57	2.14	0.05	3.78	0.43	3.54	0.23	0.06
Athens	20/07/2006	26/09/2006	68	32	0.68	1.76	0.90	0.02	2.34	0.08	0.59	0.04	0.01
Athens	26/09/2006	30/11/2006	65	229	30.78	3.84	27.75	0.16	14.92	2.27	19.9	0.82	0.14
Riga	03/12/2005	06/02/2006	65	81	7.10	1.53	5.03	0.04	2.71	0.21	5.44	0.09	0.13
Riga	06/02/2006	11/04/2006	64	68	6.08	1.14	2.44	0.17	2.20	0.11	4.28	0.09	0.11
Riga	11/04/2006	13/06/2006	63	68	0.32	1.05	0.91	0.01	1.97	0.11	0.30	0.17	0.06
Riga	13/06/2006	14/08/2006	62	43	0.37	1.05	0.75	<0.01	1.82	0.09	0.32	0.13	0.07
Riga	14/08/2006	12/10/2006	59	45	0.69	1.21	1.15	0.02	1.49	0.13	0.43	0.10	0.08
Riga	12/10/2006	05/01/2007	85	41	0.82	0.43	1.68	0.01	1.51	0.08	0.53	0.08	0.12

Table 2: Gas measurements with IVL passive samplers sheltered from rain. Bi-monthly samples (µg/m^3)

No	Station	Start time	End time	days	Temp C	HNO_3 µg/m^3 STP	SO_2 µg/m^3 STP	NO_2 µg/m^3 STP	O_3 µg/m^3 STP
1	Prague	08/11/2005 12:00	01/02/2006 12:00	85	3.0	0.39			
1	Prague	01/02/2006 12:00	02/05/2006 12:00	90	5.0	0.72			
1	Prague	02/05/2006 12:00	01/08/2006 12:00	91	20.0	1.55			
1	Prague	01/08/2006 12:00	08/11/2006 12:00	99	15.0	0.72			
3	Kopisty	15/11/2005 12:00	01/02/2006 12:00	78	3.0	0.59			
3	Kopisty	01/02/2006 12:00	02/05/2006 12:00	90	5.0	0.41			
3	Kopisty	02/05/2006 12:00	31/07/2006 12:00	90	20.0	1.13			
3	Kopisty	31/07/2006 12:00	13/10/2006 12:00	74	15.0	0.60			
10	Bottrop	21/11/2005 14:00	31/01/2006 19:00	71	0.0	0.27			
10	Bottrop	31/01/2006 19:00	31/03/2006 19:00	59	5.0	0.27			
10	Bottrop	31/03/2006 19:00	31/05/2006 20:00	61	15.0	0.74			
10	Bottrop	31/05/2006 20:00	01/08/2006 11:35	62	17.5	2.20			
10	Bottrop	01/08/2006 11:35	30/09/2006 18:00	60	20.0	0.78			
10	Bottrop	30/09/2006 18:00	02/12/2006 12:30	63	10.0	0.26			
21	Oslo	24/10/2005 13:00	02/01/2006 13:30	70	3.0				16.1
21	Oslo	24/10/2005 13:00	02/01/2006 13:30	70	3.0				18.7
21	Oslo	02/01/2006 13:30	28/02/2006 13:45	57	2.0	0.30			23.1
21	Oslo	02/01/2006 13:30	28/02/2006 13:45	57	2.0				24.8
21	Oslo	28/02/2006 13:45	02/05/2006 13:50	63	5.0	0.23			46.5
21	Oslo	28/02/2006 13:45	02/05/2006 13:50	63	5.0				45.5
21	Oslo	02/05/2006 13:50	29/06/2006 13:50	58	13.0	0.52			60.6
21	Oslo	02/05/2006 13:50	29/06/2006 13:50	58	13.0				58.8
21	Oslo	29/06/2006 13:50	31/08/2006 13:45	63	15.0	0.76			51.5
21	Oslo	29/06/2006 13:50	31/08/2006 13:45	63	15.0				50.2
21	Oslo	31/08/2006 14:00	27/10/2006 12:30	57	12.6	0.21			20.6
21	Oslo	31/08/2006 14:00	27/10/2006 12:30	57	12.6				20.4
23	Birkenes	19/10/2005 14:00	01/01/2006 07:00	74	3.0	0.05			
23	Birkenes	01/01/2006 07:00	01/02/2006 06:45	31	2.0	0.23			
23	Birkenes	01/02/2006 07:00	01/03/2006 07:00	28	3.0	0.11			
23	Birkenes	01/03/2006 07:00	06/05/2006 06:00	66	5.0	0.15			
23	Birkenes	01/05/2006 06:00	01/07/2006 06:00	61	13.0	0.30			
23	Birkenes	01/07/2006 06:00	01/09/2006 06:00	62	15.0	0.32			
23	Birkenes	01/09/2006 06:00	01/11/2006 07:00	61	7.0	0.17			
24	Stockholm	21/11/2005 12:00	03/01/2006 12:00	43	-1.0	0.38	3.67	19.52	31.5
24	Stockholm	03/01/2006 12:00	02/03/2006 12:00	58	-3.0	1.04	2.46	16.01	47.5
24	Stockholm	02/03/2006 12:00	02/05/2006 12:00	61	4.6	0.71	1.80	11.31	71.9
24	Stockholm	02/05/2006 12:00	03/07/2006 12:00	62	15.6	0.72	1.14	8.03	77.3
24	Stockholm	03/07/2006 12:00	04/09/2006 12:00	63	16.2	0.99	1.35	10.65	67.1
24	Stockholm	04/09/2006 12:00	22/11/2006 12:00	79	7.5	0.39	0.97	14.97	45.7
26	Aspvreten	01/11/2005 12:00	03/01/2006 12:00	63	-2.0	0.11	0.63	3.52	27.7
26	Aspvreten	03/01/2006 12:00	02/03/2006 12:00	58	-3.9	0.26	1.14	3.28	45.5
26	Aspvreten	02/03/2006 12:00	02/05/2006 12:00	61	3.8	0.13	0.67	2.47	65.1
26	Aspvreten	02/05/2006 12:00	03/07/2006 12:00	62	14.3	0.20	0.48	1.44	61.7
26	Aspvreten	03/07/2006 12:00	04/09/2006 12:00	63	15.0	0.15	0.56	1.16	47.6

No	Station	Start time	End time	days	Temp C	HNO_3 µg/m^3 STP	SO_2 µg/m^3 STP	NO_2 µg/m^3 STP	O_3 µg/m^3 STP
26	Aspvreten	04/09/2006 12:00	22/11/2006 12:00	79	6.7	0.07	0.46	1.28	25.2
31	Madrid	02/11/2005 12:00	02/01/2006 12:00	61	8.0	0.45			
31	Madrid	02/01/2006 12:00	06/03/2006 12:00	63	10.0	0.34			
31	Madrid	06/03/2006 12:00	10/05/2006 12:00	65	10.0	0.63			
31	Madrid	10/05/2006 12:00	13/07/2006 12:00	64	20.0	1.84			
31	Madrid	13/07/2006 12:00	13/09/2006 12:00	62	20.0	2.47			
31	Madrid	13/09/2006 12:00	02/11/2006 12:00	50	15.0	0.94			
33	Toledo	20/12/2005 12:00	20/02/2006 12:00	62	8.0	0.42			
33	Toledo	20/02/2006 12:00	20/04/2006 12:00	59	13.0	0.30			
33	Toledo	20/04/2006 12:00	16/06/2006 12:00	57	12.0	0.56			
33	Toledo	16/06/2006 12:00	17/08/2006 12:00	62	20.0	1.34			
33	Toledo	17/08/2006 12:00	19/10/2006 12:00	63	20.0	0.78			
33	Toledo	19/10/2006 12:00	21/12/2006 12:00	63	13.0	0.19			
35	Lahemaa	09/11/2005 11:30	03/01/2006 14:15	55	0.0	0.38			
35	Lahemaa	03/01/2006 14:30	21/03/2006 14:18	77	-4.0	0.80			
35	Lahemaa	21/03/2006 14:20	17/05/2006 13:55	57	2.0	0.52			
35	Lahemaa	17/05/2006 14:00	12/07/2006 10:50	56	14.0	0.36			
35	Lahemaa	12/07/2006 11:00	07/11/2006 11:00	118	12.6	0.19			
37	Dorset	24/11/2005 12:00	02/02/2006 12:00	70	5.0	0.75	2.23	3.78	42.5
37	Dorset	02/02/2006 12:00	31/03/2006 12:00	57	7.0	0.23	1.54	1.50	69.1
37	Dorset	31/03/2006 12:00	01/06/2006 12:00	62	8.0	0.36	1.22	0.72	67.0
37	Dorset	01/06/2006 12:00	03/08/2006 12:00	63	20.0	0.32	0.64	0.78	52.4
37	Dorset	03/08/2006 12:00	27/10/2006 12:00	85	15.0	0.23	1.00	1.01	43.5
37	Dorset	27/10/2006 12:00	23/11/2006 12:00	27	10.0	0.28	1.63	3.35	42.5
40	Paris	20/10/2005 17:15	16/12/2005 10:05	57	5.0	0.27			
40	Paris	16/12/2005 10:07	22/02/2006 10:10	68	5.0	0.31			
40	Paris	22/02/2006 10:10	20/04/2006 07:50	57	13.0	0.40			
40	Paris	20/04/2006 10:20	20/06/2006 16:45	61	14.0	1.42			
40	Paris	20/06/2006 16:50	22/08/2006 10:34	63	20.0	2.47			
41	Berlin	12/01/2006 11:30	20/04/2006 16:30	98	5.0	0.22			
41	Berlin	20/04/2006 16:30	20/07/2006 12:00	91	20.0	0.92			
41	Berlin	20/07/2006 12:00	20/10/2006 12:00	92	12.0	0.80			
41	Berlin	20/10/2006 12:00	10/01/2007 12:00	82	10.0	0.17			
44	Svanvik	27/10/2005 14:00	01/01/2006 11:30	66	3.0	0.05			
44	Svanvik	27/10/2005 14:30	01/01/2006 11:30	66	3.0				40.9
44	Svanvik	27/10/2005 14:30	01/01/2006 11:30	66	3.0				40.4
44	Svanvik	01/01/2006 11:30	01/03/2006 12:15	59	2.0	0.09			60.7
44	Svanvik	01/01/2006 11:30	01/03/2006 12:15	59	2.0				61.4
44	Svanvik	01/03/2006 12:15	01/04/2006 09:00	31	4.0	<0.0			67.4
44	Svanvik	01/03/2006 12:15	01/04/2006 09:00	31	4.0				69.1
44	Svanvik	01/04/2006 09:05	01/05/2006 12:05	30	5.0	0.11			77.8
44	Svanvik	01/04/2006 09:05	01/05/2006 12:05	30	5.0				79.3
44	Svanvik	01/05/2006 12:05	01/07/2006 10:20	61	13.0	0.08			63.2
44	Svanvik	01/05/2006 12:05	01/07/2006 10:20	61	13.0				65.1
44	Svanvik	01/07/2006 12:25	01/09/2006 12:10	62	15.0	0.06			39.9
44	Svanvik	01/07/2006 12:25	01/09/2006 12:10	62	15.0				40.3
44	Svanvik	01/09/2006 12:14	03/11/2006 09:30	63	-21.0	0.03			43.9
44	Svanvik	01/09/2006 12:14	03/11/2006 09:30	63	-21.0				44.3
45	Chaumont	19/10/2005 09:00	19/12/2005 11:30	61	-4.0	0.43			

No	Station	Start time	End time	days	Temp C	HNO_3 µg/m^3 STP	SO_2 µg/m^3 STP	NO_2 µg/m^3 STP	O_3 µg/m^3 STP
45	Chaumont	19/12/2005 11:30	20/02/2006 11:30	63	-5.0	0.74			
45	Chaumont	20/02/2006 11:30	20/04/2006 15:00	59	5.0	0.45			
45	Chaumont	20/04/2006 15:00	19/06/2006 12:00	60	8.0	0.70			
45	Chaumont	19/06/2006 12:00	21/08/2006 11:00	63	20.0	0.55			
45	Chaumont	21/08/2006 11:00	19/10/2006 13:00	59	15.0	0.43			
50	Katowice	14/12/2005 12:00	13/02/2006 12:00	61	3.0	1.41			
50	Katowice	14/06/2006 12:00	18/08/2006 12:00	65	20.0	1.35			
50	Katowice	18/08/2006 12:00	17/10/2006 12:00	60	15.0	0.79			
50	Katowice	17/10/2006 12:00	24/11/2006 12:00	38	15.0	0.38			
50	Katowice	13/02/2006 12:00	18/04/2006 12:00	64	5.0	1.29			
50	Katowice	18/04/2006 12:00	14/06/2006 12:00	57	8.0	0.99			
51	Athens	31/10/2005 11:30	09/01/2006 11:30	70	12.0	0.29			
51	Athens	17/01/2006 11:00	20/03/2006 10:30	62	14.0	0.31			
51	Athens	19/05/2006 10:20	20/07/2006 12:15	62	33.0	2.65			
51	Athens	20/07/2006 12:20	26/09/2006 10:40	68	28.5	1.79			
51	Athens	26/09/2006 10:45	30/11/2006 11:15	65	19.5	0.57			
52	Riga	03/12/2005 15:00	06/02/2006 12:30	65	-6.0	0.36	3.15	24.47	29.2
52	Riga	06/02/2006 12:30	11/04/2006 14:20	64	-7.0	0.34	3.07	24.00	49.1
52	Riga	11/04/2006 14:30	13/06/2006 13:00	63	8.0	0.56	1.52	17.80	66.3
52	Riga	13/06/2006 13:00	14/08/2006 09:10	62	20.0	0.59	1.16	14.47	58.9
52	Riga	14/08/2006 09:10	12/10/2006 12:30	59	20.0	0.37	1.02	26.91	35.7
52	Riga	12/10/2006 12:30	05/01/2007 14:00	85	6.0	0.13	1.20	20.89	26.8

Appendix D

Yearly average values (pr. month and year) for HNO_3, SO_2, NO_2, O_3 and particle deposition for the exposure period

Table 1: Particle deposition pr month

No	station	start	stop	days	µg cm^{-2} month^{-1} mass	Cl^-	NO_3^-	SO_4^{2-}	NH_4^+	Ca^{2+}	Mg^{2+}	Na^+	K^+	month^{-1} ln(R_0/R)	ionb. +/-	water soluble µg cm^{-2} month^{-1}	water soluble %	HNO_3 µg/m^3	SO_2 µg/m^3	NO_2 µg/m^3	O_3 µg/m^3
1	Prague	08/11/2005	08/11/2006	365	20.8	0.28	0.98	1.01	0.06	1.13	0.03	0.22	0.06	0.02	1.64	3.8	18%	0.85			
3	Kopisty	15/11/2005	13/10/2006	332	20.3	0.09	0.60	0.91	0.09	0.35	0.03	0.17	0.10	0.02	1.13	2.4	12%	0.69			
10	Bottrop	21/11/2005	02/12/2006	376	19.5	0.69	0.57	1.22	0.07	0.60	0.08	0.51	0.08	0.02	1.20	3.8	20%	0.74			
21	Oslo	24/10/2005	27/10/2006	368	11.2	0.15	0.51	0.37	0.04	0.26	0.05	0.15	0.12	0.02	1.46	1.7	15%	0.41			36
23	Birkenes	19/10/2005	01/11/2006	378	4.8	0.32	0.36	0.21	0.02	0.22	0.04	0.25	0.05	0.01	1.44	1.5	31%	0.19			
24	Stockholm	21/11/2005	22/11/2006	366	31.3	0.53	1.11	0.72	0.12	0.57	0.06	0.50	0.09	0.02	1.33	3.7	12%	0.70	1.8	13.1	58
26	Aspvreten	01/11/2005	02/11/2006	366	4.1	0.05	0.19	0.11	0.04	0.11	0.01	0.05	0.03	0.00	1.78	0.6	14%	0.15	0.6	2.1	44
31	Madrid	02/11/2005	02/11/2006	365	15.1	0.14	0.98	0.39	0.10	1.16	0.04	0.15	0.04	0.02	2.65	3.0	20%	1.12			
33	Toledo	20/12/2005	21/12/2006	366	10.5	0.22	0.51	0.21	0.08	0.36	0.04	0.20	0.08	0.01	1.94	1.7	16%	0.60			
35	Lahemaa	09/11/2005	07/11/2006	363	10.6	0.17	0.39	0.27	0.02	0.26	0.02	0.15	0.09	0.01	1.49	1.4	13%	0.43			
37	Dorset	24/11/2005	23/11/2006	364	5.0	0.03	0.24	0.25	0.05	0.20	0.03	0.06	0.03	0.01	1.85	0.9	18%	0.37	1.3	1.7	53
40	Paris	20/10/2005	22/08/2006	306	32.6	2.02	1.68	2.43	0.05	2.34	0.14	1.34	0.09	0.04	1.42	10.1	31%	0.98			
41	Berlin	12/01/2006	10/01/2007	363	32.1	2.64	1.09	1.64	0.05	1.63	0.05	1.89	0.14	0.12	1.38	9.1	28%	0.53			
44	Svanvik	27/10/2005	03/11/2006	372	8.9	0.19	0.17	0.24	0.02	0.15	0.02	0.16	0.09	0.01	1.53	1.0	12%	0.06			54
45	Chaumont	19/10/2005	19/10/2006	365	6.0	0.02	0.27	0.18	0.03	0.25	0.02	0.11	0.04	0.01	2.49	0.9	15%	0.55			
50	Katowice	14/12/2005	24/11/2006	345	28.7	0.50	0.82	1.34	0.10	0.79	0.06	0.33	0.14	0.04	1.24	4.1	14%	1.09			
51	Athens	07/11/2005	30/11/2006	388	145.9	15.97	3.37	14.20	0.14	8.84	1.16	10.81	0.45	0.11	1.28	55.0	38%	1.11			
52	Riga	03/12/2005	05/01/2007	398	57.2	2.52	1.03	2.01	0.04	1.94	0.12	1.85	0.11	0.10	1.48	9.6	17%	0.38	1.8	21.4	43

Table 2: Particle deposition pr year

					µg cm^{-2} month^{-1}								
No	Station	Start	Stop	Days	Mass	Cl^-	NO_3^-	SO_4^{2-}	NH_4^+	Ca^{2+}	Mg^{2+}	Na^+	K^+
1	Prague	08/11/2005	08/11/2006	365	250.1	3.3	11.7	12.2	0.8	13.5	0.3	2.6	0.7
3	Kopisty	15/11/2005	13/10/2006	332	243.1	1.1	7.1	11.0	1.1	4.2	0.4	2.0	1.3
10	Bottrop	21/11/2005	02/12/2006	376	234.4	8.2	6.8	14.6	0.8	7.2	1.0	6.2	1.0
21	Oslo	24/10/2005	27/10/2006	368	134.6	1.8	6.1	4.4	0.5	3.1	0.7	1.8	1.4
23	Birkenes	19/10/2005	01/11/2006	378	57.7	3.8	4.3	2.6	0.3	2.6	0.5	3.0	0.6
24	Stockholm	21/11/2005	22/11/2006	366	375.8	6.3	13.4	8.7	1.4	6.8	0.7	6.0	1.0
26	Aspvreten	01/11/2005	02/11/2006	366	48.7	0.5	2.2	1.4	0.4	1.4	0.2	0.6	0.4
31	Madrid	02/11/2005	02/11/2006	365	180.8	1.7	11.7	4.7	1.2	14.0	0.4	1.8	0.5
33	Toledo	20/12/2005	21/12/2006	366	126.1	2.6	6.2	2.5	1.0	4.3	0.5	2.4	0.9
35	Lahemaa	09/11/2005	07/11/2006	363	127.0	2.0	4.7	3.3	0.3	3.1	0.2	1.8	1.1
37	Dorset	24/11/2005	23/11/2006	364	59.9	0.3	2.9	3.0	0.6	2.4	0.3	0.7	0.4
40	Paris	20/10/2005	22/08/2006	306	391.6	24.2	20.2	29.1	0.6	28.1	1.7	16.0	1.1
41	Berlin	12/01/2006	10/01/2007	363	384.9	31.7	13.1	19.6	0.6	19.5	0.7	22.7	1.7
44	Svanvik	27/10/2005	03/11/2006	372	106.9	2.3	2.0	2.8	0.2	1.8	0.3	2.0	1.0
45	Chaumont	19/10/2005	19/10/2006	365	72.5	0.3	3.2	2.1	0.3	3.0	0.2	1.3	0.5
50	Katowice	14/12/2005	24/11/2006	345	344.6	6.0	9.9	16.1	1.2	9.5	0.8	4.0	1.7
51	Athens	07/11/2005	30/11/2006	388	1750.2	191.6	40.5	170.4	1.7	106.1	14.0	129.7	5.4
52	Riga	03/12/2005	05/01/2007	398	686.8	30.3	12.4	24.1	0.5	23.2	1.4	22.2	1.3

Appendix E

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REPORT SERIES SCIENTIFIC REPORT	REPORT NO. OR 26/2007	ISBN 978-82-425-2880-4 (t) ISBN 978-82-425-1881-1 (e) ISSN 0807-7207	
DATE	SIGN.	NO. OF PAGES 61	PRICE NOK 150,-

TITLE	PROJECT LEADER
Trend exposure programme 2005 – 2006. Environmental data report October 2005 to December 2006	Jan F. Henriksen NILU PROJECT NO. O-8208
AUTHOR(S) Terje Grøntoft, Kari Arnesen and Martin Ferm	CLASSIFICATION * A CONTRACT REF. 2003/1193 713.9

REPORT PREPARED FOR
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ABSTRACT
This report presents the database for the period October 2005-December 2006. It includes the environmental data in the ICP-material broad field test as well as the extension made by the EU MULTI-ASSESS project. The database consists of meteorological data, pollution data as gasses and in precipitation. From the MULTI-ASSESS project it is also reported HNO_3 and particle deposits for soiling.

NORWEGIAN TITLE

KEYWORDS		
Environment	Pollution	Precipitation

ABSTRACT (in Norwegian)

** Classification*
A Unclassified (can be ordered from NILU)
B Restricted distribution
C Classified (not to be distributed)